Trade and Indu
9 September 1977 Every Friday 35p

Chief scientist on engineering design

Record sales for quartz time?

Government statistics

For more information, see the Guide to government statistics, published with Trade and Industry, 15 July 1977

Departmental responsibilities and contact points

Central Statistical Office
Great George Street, London SW1P 3AQ
01-233 followed by extension
National income and expenditure, balance of payments, index of industrial production, financial statistics, input/output statistics, development of social statistics, regional statistics ext **6135/6193**
Survey Control Unit inquiries only ext **7341**

Industry, trade, prices

Departments of Industry, Trade and Prices and Consumer Protection

Business Statistics Office
Cardiff Road, Newport, Gwent NPT 1XG
Newport 56111
General inquiries ext **2973**
Production statistics:
Annual production statistics ext **2455**
Quarterly and monthly production inquiries exts **2337/2322**
Purchases inquiry ext **2369**
Classified List of Businesses exts **2557/2751**
Distribution statistics:
Census of distribution 1971 ext **2000**
Annual inquiry into distributive and service trades, capital expenditure and stocks ext **2113**

Other offices
1 Victoria Street, London SW1H 0ET
01-215 followed by extension
Wholesale price indices exts **3351, 3544**
Capital expenditure and stocks, and investment intentions of private industry:
Manufacturing ext **3176**
Distributive and service trades ext **3345**
Retail trades turnover ext **3705**
Motor and catering trades turnover ext **3177**
Hire-purchase and other instalment credit ext **3162**
Aerospace ext **4052**
Companies:
Acquisitions and mergers, liquidity, insolvencies ext **5538**
Analysis of accounts ext **3132**
Insurance, private sector pensions funds ext **3162**
Overseas trade:
Visible ext **3131**
Invisible ext **5176**
Overseas direct investment and earnings ext **3135**
Economic indicators:
Home ext **3453**
Industrial countries ext **3442**

Abell House, John Islip Street, London SW1P 4LN **01-211** followed by extension
Scientifically qualified manpower ext **4496**
R&D expenditure by industry ext **3631**

Cromwell House, Dean Stanley Street, London SW1P 3HY **01-212** followed by extension
Shipping ext **6730**
Tourism ext **0616**

Millbank Tower, Millbank, London SW1P 4QU **01-211** followed by extension
Industrial development certificates ext **3324**
Distribution of industry ext **6073**

Dean Bradley House, 52 Horseferry Road, London SW1P 2AG **01-212** followed by extension
Manufacturing industries – production, sales, orders:
Steel and shipbuilding ext **5544**
Engineering ext **6044**
Non-ferrous Metals ext **6532**
Motor vehicles ext **0788**
Chemicals ext **6937**
Textiles, clothing, footwear, leather, man-made fibres ext **6210**
Other industries ext **6331**

Export House, 50 Ludgate Hill, London EC4M 7HU **01-248 5757** **Telex: 886143 DTI Export Ldn**
All foreign and Commonwealth statistics ext **337**

Statistics and Market Intelligence Library
ext **368**
Provides up-to-date and comprehensive trade statistics for all countries, and general statistical publications from all over the world. Overseas directories are also held. Reading room and copying facilities are available.

Energy

Department of Energy
Thames House South, Millbank, London SW1P 4QJ **01-211** followed by extension
Fuel and energy statistics ext **4292**

Customs and Excise

Customs and Excise
King's Beam House, Mark Lane, London EC3 7HE **01-626 1515**
Statistics related to all indirect taxes administered by the Department ext **2024**
Bill of Entry Service, Statistical Office, Portcullis House, 27 Victoria Avenue, Southend-on-Sea SS2 6AL
Southend 49421
United Kingdom external trade statistics ext **310**

Employment

Department of Employment
Orphanage Road, Watford, Herts WD1 1PJ
Watford 28500
Employment, unemployment, vacancies ext **403**
Earnings, wage rates, hours of work ext **651**
New earnings survey ext **500**
Stoppages of work due to industrial disputes ext **673**
Employers' labour costs ext **526**
Index of retail prices ext **630**

26 King Street, London SW1Y 6RB
01-214 8627
Family Expenditure Survey

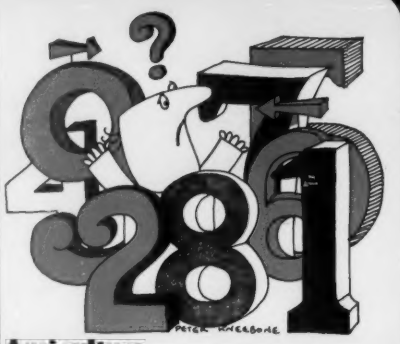
Environment, transport

Departments of the Environment and Transport
St Christopher House, Southwark Street, London SE1 0TE **01-928 7999**
Roads ext **3045**
Road traffic exts **2198, 2629**

2 Marsham Street, London SW1P 3EP
01-212 followed by extension
Passenger traffic, road vehicles, public road passenger transport ext **5533**
Inland freight transport, railways ext **7513**
Road accidents ext **7452**
Traffic of seaports ext **8323**
Road goods transport ext **8297**
Building materials exts **7147, 8411**
Construction industries ext **7142**
Planning and land use ext **4113**
Local government financial statistics ext **4627**
Population projections exts **8558, 8563**
Household projections ext **8555**
Housing ext **8551**

Taxation

Board of Inland Revenue
Somerset House, Strand, London WC2R 1LB
01-438 6649
Statistics of direct taxes, corporate income, surveys of personal incomes, personal wealth and conveyancing.



Agriculture

Ministry of Agriculture, Fisheries and Food
Whitehall Place, London SW1A 2HH
01-839 7711
General inquiries exts **7000, 7024**
National expenditure estimates on food ext **477**
Food consumption estimates exts **388, 479**
Agricultural incomes, etc exts **292, 296, 297, 565**
Agricultural and food statistics for overseas countries ext **544**
Market prices (livestock, dairy products, etc) ext **7058**

Great Westminster House, Horseferry Road, London SW1P 2AE **01-216** followed by extension
Commodity production statistics ext **7501**
Market prices (horticulture) ext **6711**
Fisheries ext **6143**

49–53 Parliament Street, London SW1A 2NH
01-233 followed by extension
Agricultural rents, land prices, etc ext **5454**

Government Buildings, Tolcarne Drive, Pinner, Middlesex HA5 2DT **01-868 7161**
Agricultural prices indices ext **35**
Wholesale price index (manufactured food and soft drinks) ext **108**
National food survey: household food consumption and expenditure ext **44**

Government Buildings, Epsom Road, Guildford GU1 2LD **Guildford 68121**
Agricultural censuses and surveys ext **518**

Population

Office of Population Censuses and Surveys
St Catherine's House, Kingsway, London WC2B 8JP **01-242 0262**

Population and vital statistics (England and Wales):
National and local estimates of population ext **2249**
Regional demography and sub-national population projections ext **2183**
Overseas migration ext **2182**
National population projections, international data and general inquiries ext **2169**
Deaths, abortions, infectious diseases ext **2229**
Births ext **2162**
Divorces and marriages ext **2168**
Social surveys ext **2292**
Census of population, general inquiries exts **2009, 2013**

Health, social security

Department of Health and Social Security
Friars House, 157-168 Blackfriars Road, London SE1 8EU **01-703 6380**
Social security statistics ext **4284**

42–46 Weston Street, London SE1 3QW
01-407 4411
Statistics of personal social services ext **230**
Statistics of health services ext **223**

Overseas aid

Ministry of Overseas Development
Eland House, Stag Place, London SW1E 5DH
01-834 2377
Statistics of British aid to developing countries ext **285**

Trade and Industry

9 September 1977

News from the Departments of Industry·Trade·Prices & Consumer Protection

This is what happened when we let our art department loose with an old record and one of the inexpensive new Smiths Industries quartz clock movements, which go into volume production next week at the company's Wishaw, Lanarkshire, factory (see page 446). Powered by a single 1.5 V battery, the new movement is far superior to conventional transitional movements, remaining accurate to within two minutes a year.

Trade and Industry

Incorporating the Board of Trade Journal

Volume 28 no. 10.

Pages 437 to 480. 9 September 1977.

Price 35p. Net subscription post inclusive, £24.99.

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Subscriptions: HMSO, PO Box 569, London SE1 01-928 6977 ext. 472

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The views expressed in contributions to *Trade and Industry* emanating from other than official sources are not necessarily those of Her Majesty's Government.

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ABC

Member of the Audit Bureau of Circulations

ISSN 0006-5323

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Trade and Industry this week

HOME

Young engineers win PETT competition

Roger Curry of Woodham Comprehensive, County Durham, and Stuart McArthur of Aylesbury Grammar School are 'Young engineers for Britain'. They are the individual winners of the *Daily Express* and Project on Engineers and Technologists for Tomorrow committee (PETT) competition with projects on electrostatic high voltage generation and aviary light and heat control respectively. Group winners were from Bemrose School, Derby, with a thermostat for central heating systems, and Plessey Co Ltd, Dorset, with a co-ordination training aid for handicapped people.

Dr Duncan Davies, chief scientist of the Department of Industry, presented the trophies at the national final on 6 September at the University of Aston in Birmingham.

'PETT's active work with schools, teachers and young people demonstrates the importance attached by the Department of Industry to the creation of more production engineers of a higher quality,' he said.

The individual winners will fly by Concorde to America, where they will tour the country's leading engineering projects. A visit to the Lyndon Johnson Manned Spacecraft Centre has also been arranged where they will meet an astronaut. In addition each has been offered a £500 scholarship for technological visits abroad. Group winners are to be given a helicopter trip to explore the North Sea gas industry ashore and out on one of the rigs, and each group will receive £250 worth of radio and television equipment which they can select for themselves.

City foreign income doubled in three years

Invisible earnings of the City of London rose by a further 31 per cent to a new peak of £1,545 million in 1976. These latest estimates, published for the first time in the Central Statistical Office's balance of payments 'Pink Book', showed that the City has doubled its foreign income over the past three years.

While insurance remains the top City earner with a further 32 per cent rise to £606 million (of which Lloyds underwriters contributed £279 million, the companies £173 million and the brokers £154 million), the biggest recent expansion has come from the banking sector which doubled its income in 1976 and has shown a remarkable rise from £35 million net in 1974, a relatively bad year, to £408 million net in 1976, the best so far. The gross earnings of the banks in 1976 was close to £1,000 million for the first time.

Other leading City contributors were the commodity trade with £247 million, brokerage with £212 million (of which the Baltic Exchange contributed £147 million and the Stock Exchange £18 million), and the investment trusts with £47 million.

Finance act guide

A tax flow chart, explaining the major changes made in taxing overseas earnings, is a new feature of a guide [1] to the 1977 Finance Act published on 5 September by the Confederation of British Industry. In explaining the legislation, the guide avoids technical language as far as possible.

The guide also covers the reductions in child tax allowances, the modified capital gains tax rules for mergers, the restatement of value added tax following the EEC sixth directive, and a number of other important tax changes.

The tax flow-chart, an easy-to-follow flow diagram covering the tax treatment of earnings from employment, is also being made available as a wall chart.

EUROPE

Welcome for Spain from Dr Owen

Foreign and Commonwealth Secretary, David Owen, who has already warmly welcomed Spain's application for membership of the EEC, was in Madrid from Monday to Wednesday this week for talks with Spanish officials including Prime Minister, Adolfo Suarez, and Foreign Minister, Marcelino Oreja.

Dr Owen said in July that a European community without Spain was an obvious gap which he believed should be filled now that Spain had freely chosen to become a democratic country. He pointed out that enlargement would undoubtedly present problems, particularly in the economic field, but he said he firmly believed that with goodwill these problems could be overcome.

Last week Senor Suarez visited The Hague, Copenhagen, Paris and Rome to discuss Spanish membership of the community. He is expected to visit other EEC capitals including London soon.

[1] *'The Finance Act 1977: An explanatory guide'*, price £2.00, and the tax flow wall chart, price £1.00, are available from Print and Publications Department, Confederation of British Industry, 21 Tothill Street, London SW1H 9LP.

OVERSEAS

BA announces new commodity rates to USA

British Airways has re-introduced some low commodity rates to New York from 5 September following approval by the United States Civil Aeronautics Board. The reduction on the normal standard cargo rate is nearly 40 per cent.

The commodities involved are cloths in bales, bolts or pieces and transfers (decalomania) both with a minimum qualifying weight of 4000 kilos. The rate for both commodities is 30p per kilo – 3p per kilo more than the original rate rejected by the CAB.

The rate is available on British Airways routes from London, Manchester and Prestwick to New York.

STATISTICS

Vehicle production in August

Vehicle production figures for August are up on the same month last year.

Provisional estimates show that 76 000 passenger cars were produced (96 000 seasonally adjusted monthly average) in August compared with 65 000 (82 000 seasonally adjusted) last year. Commercial vehicles totalled 23 900 (35 000 seasonally adjusted) this August compared with 18 100 (27 300 seasonally adjusted).

In the three months June to August, the seasonally adjusted monthly average for passenger cars fell by 14 per cent compared with the previous three months – 98 000 a month compared with 114 000.

In the same three months, the commercial vehicle production seasonally adjusted monthly average fell by 5 per cent.

New statistics on engineering

Quarterly indices of production, seasonally adjusted, for each of the 33 industries in the engineering sector are published today for the first time (see page 470). Each month, *Trade and Industry* will publish average indices for the most recent three months for individual industries where the coverage is adequate.

COMPANIES ACT 1976

An urgent reminder to all Company Secretaries

IT is most important that before 1 October 1977, you notify the Registrar of Companies of your accounting reference date under Section 2 (1) of the Companies Act 1976. (Or before the end of six months starting with your date of incorporation whichever is the later).

Every registered company should now have received a copy of the prescribed form (Form 2) for completion and return. If it has been mislaid, write or telephone for another.

REMEMBER...

The new Act requires accounts to be prepared and copies to be laid before the company and delivered to the Registrar within clearly defined time limits, governed by the company's accounting reference date, and these obligations come into operation on 1 October. If a company does not notify the Registrar of the accounting reference date it wishes to use, that date will automatically be deemed to be 31 March.

From 1 October, companies will be required by Section 12 of the Act to keep *accounting records* sufficient to show and explain their transactions, to disclose their financial position at any time and to enable the directors to prepare accounts in compliance with the Companies Acts. These records must be preserved for at least three years by private companies or six years by public companies.

ENGLAND & WALES

The Registrar of Companies,
Companies Registration Office,
Crown Way, Maindy, Cardiff CF4 3UZ.
Tel: Cardiff (0222) 388588
Ext. 2476 or 2479.

SCOTLAND

The Registrar of Companies,
Exchequer Office, 102 George Street,
Edinburgh EH2 3DJ. Tel: 031-225 5774.

ISSUED BY THE DEPARTMENT OF TRADE

ENCIRCLE TI 586 ON PAGE 478 FOR FURTHER INFORMATION

Home news

Rate of inflation falling: Price Commission index

The Price Commission index for June and July indicates a continuing fall in the rate of inflation. Figures for August show a further sharp fall in the index over the past six months to an annualised rate provisionally estimated at 11.7 per cent. The commission index has now fallen steadily month by month from a peak of nearly 21 per cent in March to the present level of under 12 per cent.

The figures for June and July are included in the report on the last two months' work of the commission before it was reorganised on 1 August. This report has been submitted to ministers and will be published in due course.

The Price Commission index is based on price increases that larger concerns propose making. They cannot make the increases until 28 days after notification and in practice the time lag may be greater than this. The commission index has shown itself to be a forward indicator of trends in prices.

In July there was a big reduction in both the numbers and amounts of price increase notified and this fall continued in August. Provisional information for this month indicates that both price rises notified and numbers of notifications were very much smaller than in any comparable month since control began in April 1973.

Compared with the monthly average for March to May, the period covered by the last report, notifications in June and July were:

	Notifications received	
	Number	Amount of price increase
		£ million
March-May, average	610	907
June	726	620
July	481	361
August, estimate	130	170

All domestic oil heaters to be safe

Retailers and wholesalers are affected from 1 September 1977 by new regulations for the safety of portable oil heaters. The regulations, [1] made under the Consumer Protection Act 1961, apply to all portable heaters suitable for domestic use offered for sale in Great Britain, whether new or second hand.

The regulations are based on British Standard 3300:1974. They replace the Oil Heater Regulations 1962 and require all heaters, other than those designed to operate only when fixed to a rigid support, to have a self-extinguishing facility so that if one is overturned while alight, the heater is automatically extinguished within 15 seconds.

In addition the new regulations embody the comprehensive safety requirements of the 1962 regulations. These relate to such matters as construction, design and safe performance. They cover, among other things, stability, limitation of spillage of fuel on overturning, limitation of the emission of carbon monoxide, surface temperature, operation when out of level, fire risk to surroundings and safe performance in a draught. In addition, heaters are required to bear specified warnings.

Oil heater manufacturers in this country have been complying with the 1974 edition of the British Standard since it was published and all new oil heaters which they produce bear the 'Kite-mark' denoting compliance with this standard.

Manufacturers, importers, wholesalers and retailers are all liable to prosecution if they sell non-complying appliances. As in the case of the 1962 regulations, the new regulations will be enforced by local weights and measures authorities.

[1] The Oil Heaters (Safety) Regulation 1977, SI 1977/167, HMSO price 12p.

NEB invests in Merseyside manufacturer

The National Enterprise Board has subscribed for £100,000 partly convertible redeemable preference shares at par in Hemmings Plastics Ltd, a Merseyside plastics manufacturer. The preference shares are convertible into new ordinary shares to the extent necessary to give the NEB 29.8 per cent of the enlarged equity.

Hemmings is a specialist manufacturer of plastic closures for the pharmaceutical and cosmetic industry, employing 75 at Netherley, near Liverpool. The expansion project will create an additional 30 jobs and, therefore, is also eligible for regional selective financial assistance from the Department of Industry.

The NEB finance is required for new product development and for a factory extension and new plant in order to take advantage of the growing demand for its products. Without an injection of equity at this stage in its development, the company would have had to delay its expansion plans and might have missed the market opportunities available to it.

One-day seminars on energy efficiency

More efficient use of energy in manufacturing industry is being encouraged by means of a series of one-day seminars. Starting in the

Sir Peter Carey visits JCB

Sir Peter Carey (seated, centre), permanent secretary of the Department of Industry, being informed about the manufacture of earthmoving equipment by Gilbert Johnston (left), group planning director, and Anthony Bamford (right), chairman and managing director, of J. C. Bamford Excavators Ltd of Rocester, Staffordshire. During his visit to the JCB factory recently, Sir Peter was accompanied by John Thompson (standing), director of the department's west Midlands regional office.

autumn and organised by the Department of Industry, through its Energy Unit and research associations, the seminars will each cover a specific industrial sector.

The first four events will be concerned with non-ferrous metals, Birmingham, 18 October; pottery, Stoke-on-Trent, 9 November; paper-based industries, Manchester, 22 November; and heavy clay and refractories, Stoke-on-Trent, 7 December.

Each seminar will show what can be achieved in practice in the more efficient use of energy and will give the findings of the industrial energy thrift scheme and the energy audit scheme. It will also provide a forum for the exchange of ideas and information for those concerned with this aspect of industry.

The industrial energy thrift scheme and energy audit scheme were initiated by the Department of Industry to promote the more efficient use of energy in industry. The main provision of the thrift scheme is the campaign of one-day confidential visits to selected companies to give advice and gather information on energy use in manufacturing industry. The audit scheme comprises a more detailed investigation into energy and materials use in manufacturing industry and is integrated with a parallel series of studies being carried out by the Energy Technology Support Unit for the Department of Energy.

For further details:

Energy saving in the non-ferrous metals industry, Strathallan Hotel, Birmingham, 18 October, contact: Dr B. H. C. Waters, BNF Metals Technology Centre, The Grove Laboratories, Denchworth Road, Wantage, Oxon OX12 9BJ, tel. Wantage (02357) 2992.

Energy usage and conservation in the pottery industry, British Ceramic Research Association, Stoke-on-Trent, 9 November, contact: Mr W. Holmes, British Ceramic Research Association, Queens Road, Penkhull, Stoke-on-Trent ST4 7LQ, tel. Stoke-on-Trent (0782) 45431.

Potential for energy saving in the paper-based industries, Grand Hotel, Manchester, 22 November, contact: The Administration Officer, Information and Training Division, PIRA, Randalls Road, Leatherhead, Surrey KT22 7RU, tel. Leatherhead 76161.

Energy usage and conservation in the heavy clay and refractories, British Ceramic Research Association, Stoke-on-Trent, 7 December, contact: Mr R. Ford, British Ceramic Research Association, Queens Road, Penkhull, Stoke-on-Trent ST4 7LQ, tel. Stoke-on-Trent (0782) 45431.

First use of new landing system at international airport

Automatic landings using for the first time a microwave landing system (MLS) at an international civil airport were made on 31 August in Britain by a Royal Aircraft Establishment HS 748. Five consecutive landings were made at Gatwick international airport using a Doppler MLS co-located with the existing instrument landing system on runway 08. They took place as part of the current United Kingdom trials programme planned to provide actual operational experience of MLS at civil airports as recently urged by the council of the International Civil Aviation Organisation (ICAO).

RAE's Hawker Siddeley 748 making an automatic landing under guidance of Doppler MLS at Gatwick. In the foreground (left) is the elevation aerial array with the transmitter cabin and temporary housing for tracking equipment alongside.

Plessey Co Ltd has developed the ground and airborne elements of the Doppler MLS which is Britain's contender for adoption by the ICAO as the international standard of landing guidance for service into the twenty-first century. Competing systems are being proposed by the United States and West Germany.

The VHF/UHF instrument landing system adopted by the ICAO in 1949 has undoubtedly given valuable service but anticipated air traffic loadings for the 1980s and 1990s and the flight characteristics of projected aircraft, as estimated in the mid-60s, pointed to the need for a new landing guidance system. A comparative study of potential system techniques was initiated in Britain jointly by the Department of Industry, the Civil Aviation Authority and the Ministry of Defence and involved a number of leading electronics companies. Associated work was carried out by the radio department of the Royal Aircraft Establishment.

In 1973 the UK authorities selected Doppler as the technique on which it would base its submission to ICAO for a microwave landing system.

Doppler MLS was carried rapidly through the transition from study phase to building experimental versions of the ground and airborne subsystems. These successfully underwent all the trials and evaluation necessary for a compliant submission to be made to ICAO in December 1975. In parallel an extensive simulation programme, investigating multipath effects in particular, was carried out by the Royal Aircraft Establishment.

As its name implies, the basic principle on which Doppler MLS depends is the Doppler effect. Everybody has heard the whistle or siren from a passing train or ambulance and knows that the pitch of the note changes as it goes past, being higher as it approaches and dropping as it recedes. This change in frequency, or Doppler shift, occurs for all types of waves be they sound, light or microwaves. By arranging for a microwave source to move smoothly along a straight line, measurement of this Doppler frequency shift at any point enables the angle of that point relative to the source to be calculated simply.

This is precisely what is required for a landing guidance system and is the basis of Doppler MLS, whereby space is uniquely coded in frequency. By decoding the signal at the aircraft, direct measurement of angle is available. Fundamentally therefore, Doppler MLS radiates signals such that, for each horizontal angle and each elevation angle within the coverage there exists a discrete, measurable frequency. The aircraft can derive angle information by measuring a single frequency. By simply switching (commutating) a radiating source along a short array of closely spaced elements in a repetitive manner, a practical system can be built economically which is more than adequate for landing system purposes.

Clothing manufacturer expands at Blackpool

Mikita Fashions Ltd is to occupy an advance factory of about 900 m² (10 000 sq ft) built by the English Industrial Estates Corporation for the Department of Industry at Bristol Avenue, Blackpool.

Mañufacturers of ladies clothing, Mikita presently occupy small premises in Blackpool but require larger premises to increase production and expand their business by way of manufacturing and selling their own brand name garments to the retail trade. The transfer of operations to the new premises should eventually create 39 additional jobs.

Official appointments

South Eastern Gas Consumers' Council: Roy Hattersley, Secretary of State for Prices and Consumer Protection, has appointed Mrs P. A. Sawyer and Mr F. F. Baker as members of the South Eastern Gas Consumers' Council until 30 June 1980 and 30 June 1979 respectively.

South Western Gas Consumers' Council: Roy Hattersley, Secretary of State for Prices and Consumer Protection, has appointed Mr F. Phillips as chairman of the South Western Gas Consumers' Council from 1 September 1977 until 31 August 1980.

North Eastern Gas Consumers' Council: Roy Hattersley, Secretary of State for Prices and Consumer Protection, has appointed Mrs W. E. M. Atkinson and Mr K. B. Childs as members of the North Eastern Gas Consumers' Council until 28 February 1980.

Patents endorsed 'licences of right'

Under section 35 of the Patents Act 1949 the following patents were endorsed 'licences of right' on the date specified.

23 August 1977
1263959 Standard Telephones and Cables Ltd
Improvements in or relating to data transmission
1318858 Standard Telephones and Cables Ltd
Improvements in or relating to telephone circuits
1336464 Standard Telephones and Cables Ltd
Improvements in or relating to magnetic thin film
1362484 Standard Telephones and Cables Ltd
Engraving apparatus and method
1404283 Standard Telephones and Cables Ltd
AC phase control circuit
1440188 Standard Telephones and Cables Ltd
Rotational movement meter
1441147 International Standard Electric Corporation
Transducer holder and cover assembly
1047679 International Standard Electric Corporation
Arrangement for correction of geometric distortion in a raster displayed on a cathode ray tube
1340585 ITT Industries Inc
Electrical contact
1408225 ITT Industries Inc
Switch arrangement
1409737 Exacta Circuits Ltd
Through-hole plated printed circuits
1410780 Exacta Circuits Ltd
Through-hole plated printed circuits
1447805 Chinoin Gyogyszer Es Vegyeszeti Termekek Gyara RT
Improvements in ion-exchange resins

Any person who claims that the patentee at the time of endorsement of any of the above patents was precluded by a contract in which claimant is interested from granting licences under the patents may apply for cancellation of the endorsement on patents form no. 45 within two months after the date of endorsement. E. Armitage, Comptroller

Letters to the Editor

Letters to the Editor should be addressed to the Editor, *Trade and Industry*, Room 437, 1 Victoria Street, London SW1H 0ET, and *not* to HMSO.

Particulars of dealers in securities and of unit trusts

The following changes have taken place in parts 1, 4 and 5 of the 1977 edition of 'Particulars of Dealers in Securities and of Unit Trusts' published in May under the Prevention of Fraud (Investments) Act 1958:

PART 1 HOLDERS OF PRINCIPALS' LICENCES

Name	Nationality or country of incorporation	Address
ADDITIONS		
Dai-Ichi Kangyo Paribas Ltd	Great Britain	35 Basinghall Street, London EC2V 5DB
Gerard & National (Fund Management) Ltd	Great Britain	32 Lombard Street, London EC3V 9BE
Goldschmidt & Charteris Ltd	Great Britain	Dunster House, Mincing Lane, London EC3R 7BL
W.A.F. Consulting Ltd	Hong Kong	4th Floor, Stock Exchange Buildings, Old Broad Street, London EC2N 1HH
CHANGES OF ADDRESS		
Automated Real-Time Investment Exchange Ltd	Great Britain	2nd Floor, Ibex House, 42/7 Minories, London EC3N 1EU
Dai-Ichi Kangyo Paribas Ltd	Great Britain	1/3 College Hill, London EC4R 2RA
European Trading Company	Luxembourg	80 Bishopsgate, London EC2
Fraser [Robert Fraser & Partners Ltd]	Great Britain	1 Noble Street, London EC2V 7JH
Harvard Securities Ltd	Great Britain	York House, 199 Westminster Bridge Road, London SE1 7UT
Mekie and Co Ltd	Great Britain	185-192 High Holborn, London WC1
Sun Hung Kai Securities (UK) Ltd	Great Britain	Blackfriars House, 19 New Bridge Street, London EC4V 6BY

PART 4 EXEMPTED DEALERS including TRUSTEE SAVINGS BANKS

No changes

PART 5 AUTHORISED UNIT TRUST SCHEMES

Group and/or name and address of management company	Scheme	Trustee
ADDITIONS		
M. and G. Group Ltd Three Quays Tower Hill London EC3R 6BQ		
Transatlantic and General Securities Co Ltd	Vanguard Trustee Fund	Barclays Bank Trust Co Ltd 54 Lombard Street London EC3P 3AH
CHANGES		
DELETE		
Raphael Unit Trust Managers Ltd 10 Throgmorton Avenue London EC2N 2DP	Grace Unit Trust	Barclays Bank Trust Co Ltd 54 Lombard Street London EC3P 3AH
AND REPLACE BY		
Emson and Dudley Trust Management Ltd Arlington House 20 Arlington Street St James's London SW1A 1RE	Emson and Dudley Trust	Barclays Bank Trust Co Ltd 54 Lombard Street London EC3P 3AH

The following changes have taken place in the entry for 'Henderson Unit Trust Management Ltd' in the 'Trustee' column against 'Henderson North American Gross Fund'.

DELETE
The Commercial Union Assurance Co Ltd
St Helens
1 Undershaft
London EC3P 3DQ

AND REPLACE BY
Williams and Glyn's Bank Ltd
20 Birchin Lane
London EC3P 3DP

AMALGAMATIONS
Save and Prosper Ebor General Fund and Save and Prosper Ebor Capital Accumulator Fund have amalgamated with Save and Prosper (UK) Equity Fund.

TERMINATIONS
Save and Prosper Ebor General Fund and Save and Prosper Ebor Capital Accumulator Fund will terminate pursuant to their amalgamation with Save and Prosper (UK) Equity Fund.
Save and Prosper Commodity Pension and Charities Fund terminated with effect from 16 August 1977 pursuant to Extraordinary Resolution of the Unitholders.

The following trusts managed by Britannia Trust Management Ltd all terminated with effect from 1 August 1977 following their various amalgamations details of which have been previously published.

Britannia High Income Trust
Slater Walker Capital Growth Unit Trust[1]
Slater Walker Century Trust[1]
Slater Walker City of London Trust[1]
Slater Walker Commercial Consolidated Trust[1]
Slater Walker Consolidated Trust[1]
Slater Walker Financial Trust[1]
Slater Walker Gas Industry and Power Trust[1]
Slater Walker Income Unit Trust[1]
Slater Walker International Consumer Trust[1]
Slater Walker Investment Trust Unit Trust[1]
Slater Walker Investors General Trust[1]
Slater Walker National Resources Trust[1]
Slater Walker Plantations and General Trust[1]
Slater Walker Provident Investors Trust[1]
Slater Walker Scottish Trust[1]
Slater Walker Security First Trust[1]
Slater Walker Shamrock Trust[1]
Slater Walker Unit D Trust[1]
Slater Walker Universal Second Trust[1]

[1] Details for these trusts were not included in the 1977 edition of 'Particulars of dealers in Securities and of Unit Trusts'.

Government sales

Ministry of Defence

21 September 1977 - Furniture

Location
Ordnance Support Unit, Liphook, Hants

Auctioneers
Austin and Wyatt (Dept L), 79 High Street, Fareham, Hants (tel. 0392 4211).
The sale consists of small or single item lots of furniture.

22 September 1977 – Furniture

Location
Cavalry Barracks, Redford, Edinburgh

Auctioneers
Dixon and Wallace (Dept L), Bank Buildings, Graham Square, Glasgow E1 (tel. 041-554 2447).
The sale consists of small or single item lots of furniture.

29 September 1977 – Miscellaneous

Location
Hilltop Motor Hotel, London Road, Carlisle

Auctioneers
Harrison and Hetherington (Dept L), Borderway Mart, Rosehill, (tel. 0228 26292).

The stores lying at 14 MU, RAF Carlisle, and other sites in the north of England comprise clothing, engineering and machine tools, electronic equipment, cameras, watches, furniture, vehicles and other miscellaneous items.

Catalogues which give details of the lots, conditions of sale, viewing times, etc, are available from the auctioneers from two weeks before and up to the day of the sale, price 40p, postage 15p (postal orders only).

Plant and Machinery
Industrial Property

SALES & VALUATIONS

UK & OVERSEAS

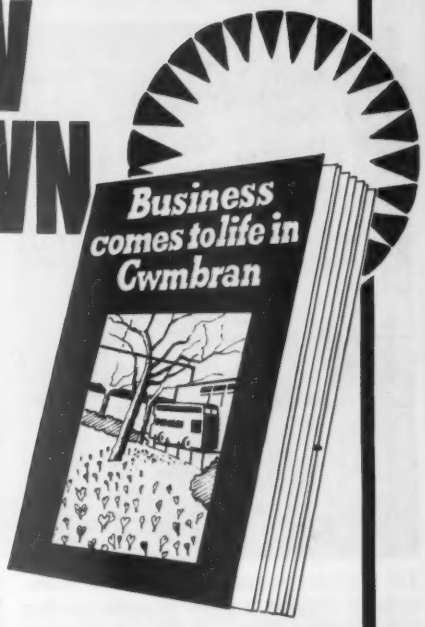
Henry Butcher & Co

London 01-405 8411
Leeds 0532 457356
Irish Associate: Dublin Tel: Dublin 764471

ENCIRCLE TI 584 ON PAGE 478 FOR FURTHER INFORMATION

Brighten your day with a success story

CWMBRAN NEW TOWN



When you plan to expand or begin manufacture in Britain, Cwmbran's experience can be of real value to you: for Cwmbran is one of Britain's most successful industrial developments. Cwmbran Development Corporation built almost 50 factories in a two year programme and let them all within a year! Already more than 170 industrialists have made Cwmbran their industrial homes. We know the problems of relocation and have solved them.
London is only 90 mins. away by the new High Speed Trains and only a little over two hours by M4. We are 90 mins. from Birmingham by M5/M50. We have 45,000 people, excellent housing, schools and shops, and every facility for work and leisure. Modern factories and leasehold sites are still available, and the Corporation welcomes enquiries from industrialists in the U.K. or overseas who wish to expand in a beautiful area with the aid of Government grants. Substantial rent concessions may apply. The key men who come with new industry can be housed immediately.
Get the facts. Please use the coupon or write or telephone today.

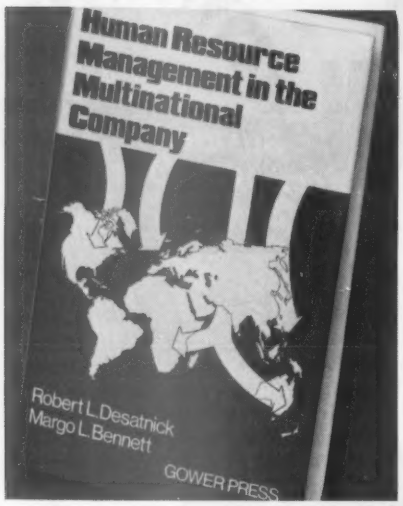
To R. P. Menday, M.B.E., M.C., General Manager, Cwmbran Development Corporation, Gwent House, Town Centre, Cwmbran, Gwent NP4 3XJ, Wales. Telephone Cwmbran 67777.

Name_____
Position_____
Company_____
Address_____
TI3

ENCIRCLE TI 585 ON PAGE 478 FOR FURTHER INFORMATION

New publications

Multinational management



The primary cause of failure in multinational ventures is a lack of understanding of the essential differences between operating in the domestic and in the foreign environment. This is a finding of a detailed study of the problems of personnel management in multinational companies by two eminent business consultants. They outline the possible effects of such factors as cultural, social, educational and technological, as well as governmental and union attitudes on the success of a company. Using the case study of a large, though anonymous, American company, they suggest solutions to the problems of personnel management and provide details of actual techniques, including specimen documents and procedures based on those used by successful companies.

Whilst emphasising the importance to a company of adaptation to the situation in a particular country, the major obstacles to effective performance are not caused by government or union obstruction or lack of local expertise, but from within the management organisation itself. Therefore the key to success lies in the proper selection, training and supervision of the local manager, who may be an executive of the company sent abroad. In this case the authors suggest appropriate strategies for manpower planning and forecasting, career development, compensation and repatriation. Alternatively a national of the country concerned may be appointed. In this case guidelines are provided for the transfer of managerial expertise and on adapting modern management, methods and techniques to the local environment.

Final chapters consider the trends in the world business environment, particularly the increasing emphasis on social accountability, and their likely effects on the future of multinational companies. Transnational companies must develop a sensitivity to the aspirations and goals of the societies and individuals in whose countries they operate, and in this respect the 'director of human resources' or personnel manager will play an important role.

Human Resource Management in the Multinational Company, by R. L. Desatnick and M. L. Bennett, edited by Raymond Maddison. (411 pages. Gower Press. 1977. £12.50. ISBN 0 566 02003 3.)

An instrument of development

International trade may not be the crux of development, but it is an important element in the developing strategy of third world countries. Their policy choices in this area – and those of other trading countries – can have major repercussions on their development potential. As a recent substantial study, *Trade and Developing Countries*, observes 'much of the debate on the role of international trade has, in fact, arisen from the apparent failure of such trade to act as an "engine of growth" in many – but by no means all – developing countries'.

This extended work on the subject has been funded by the Ministry of Overseas Development and Grindlays Bank Ltd. It ranges widely over its subject discussing trade and development, the institutional background, commodity trade, agricultural and manufactured goods, finance and economic co-operation and trade among developing countries.

A final chapter reviews the third world's trade prospects in the context of present economic developments. It concludes with a statement in support of international trade which 'should be regarded neither as a panacea nor as an invention of "foreign devils", but as an instrument of development'.

The book is valuable too, for its incidental features including appendices of commodity agreements since the war and statistics of various commodities. The glossary of terms and thorough bibliographical arrangements should also enhance its value.

Trade and Developing Countries, by Kathryn Morton and Peter Tulloch. (376 pages. Croom Helm in association with The Overseas Development Institute. 1977. £9.95. ISBN 0 85664 303 3.)

Offshore register

The growth of the world offshore industry has resulted in *Lloyd's Register of Shipping* expanding the section on 'Offshore Units' formerly included in its Register. The addition of 'submersibles' and 'diving systems' has allowed it to be published separately.

This new reference book lists nearly 400 offshore units, over 200 submersibles and covers all diving systems classed or certified by Lloyd's. An alphabetical list of owners of the equipment gives their addresses, and telex and telephone numbers where known.

Comprehensive descriptions are arranged in tabular form, giving all known offshore mobile drilling ships, drilling barges, semi-submersibles, self-elevating units and submersible barges, together with units under construction. Full details are included of all manned and unmanned submersibles.

A section on diving systems provides information on diving bells, observation chambers, pressurised diving suits, deck compression chambers and diving complexes.

Register of Offshore Units, Submersibles and Diving Systems 1977-78. (212 pages. Lloyd's Register of Shipping. 1977. £10.00. Subscribers to Lloyd's Register receive one free copy for every Register purchased.)

Management philosophy for engineering design

Interfaces are the lines or surfaces which separate differing states: in organisational terms they constitute the demarcation areas between departments. Alternatively, interfaces can be considered as barriers across which information passes. A new study published by the Design Council, starts by looking at the all-important interface between engineering design and commercial departments in industry.

The author then considers other interfaces of importance; these include the research-engineering interface, the project engineering-functional interface and many others. This is followed by the equally important field of design-standardisation and design-quality control interfaces. Finally the man/machine interface is briefly explored: perhaps the most crucial of all.

The author, formerly director of engineering with several large companies, is a member of the Design Council's engineering design advisory committee. The conclusions he draws in arriving at a management philosophy for engineering design have clear implications for the organisation of companies, the production process, as well as for the design of products themselves. This new and exploratory work should be of iterest to engineers, engineering design students and others concerned with the management of productive industries.

There is no bibliography, and more importantly, no index. The book is the poorer for their absence.

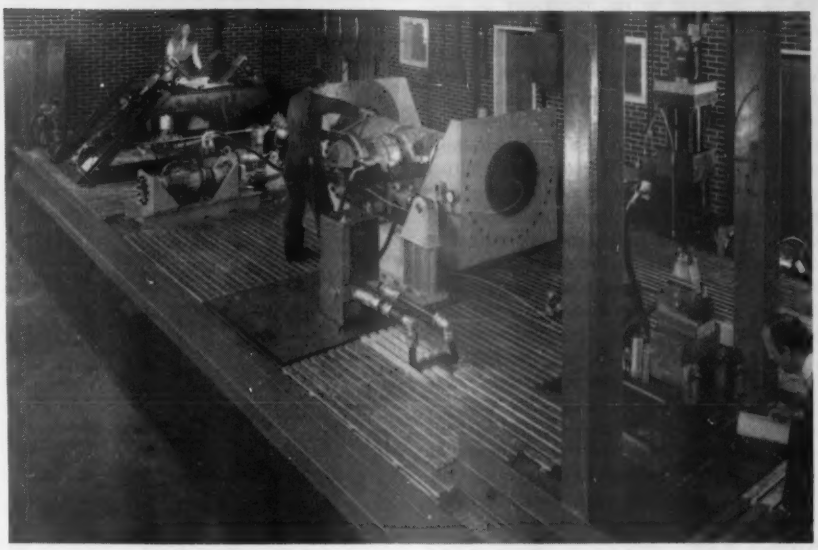
Engineering Design Interfaces: a management philosophy, by Charles H. Flurscheim. (138 pages. Design Council Publications, 28 Haymarket, London SW1Y 4SU. 1977. £4.95. ISBN 0 85072 051 6.)

Technology news

Offshore steels research at the National Engineering Laboratory

In recent years NEL, following a lengthy study of metal fatigue, has strongly advocated full-scale fatigue testing of structures under realistic conditions of random-type service loading conditions. To do this, an extensive array of test equipment including sophisticated control systems has been accumulated, and a comprehensive test programme carried out on a variety of structures and joints. This meant that NEL was ideally qualified to undertake the extensive investigation of large-scale testpieces required by the UKOSRP the UK offshore steels research project, and has been engaged in this work for the past two years.

Two important aspects of the UKOSRP programme are the study of the effect of realistic variable-amplitude loading on the fatigue strength of welded joints and the experimental determination of the fatigue strength of tubular welded joints including experimental stress distribution studies.



1.8 m diameter chord joint being tested at NEL.

Cruciform joints

Because frequency of stress cycling is only important in the presence of the corrosive environment, in-air tests can be done at much higher frequencies. Some of the tests being carried out include axial loading tests, bending tests, constant-amplitude tests and variable-amplitude tests to a typical offshore spectrum. In addition two further variations of spectrum are investigated to enable a study of the effectiveness of fracture-mechanics life prediction methods to be undertaken.

In the sea water tests cantilever bending specimens are cycled at the wave frequency in an artificial sea water environment, under realistic spectrum loading conditions. The effects of intermittent wetting and cathodic protection are also investigated.

Small and medium tubular T-joints

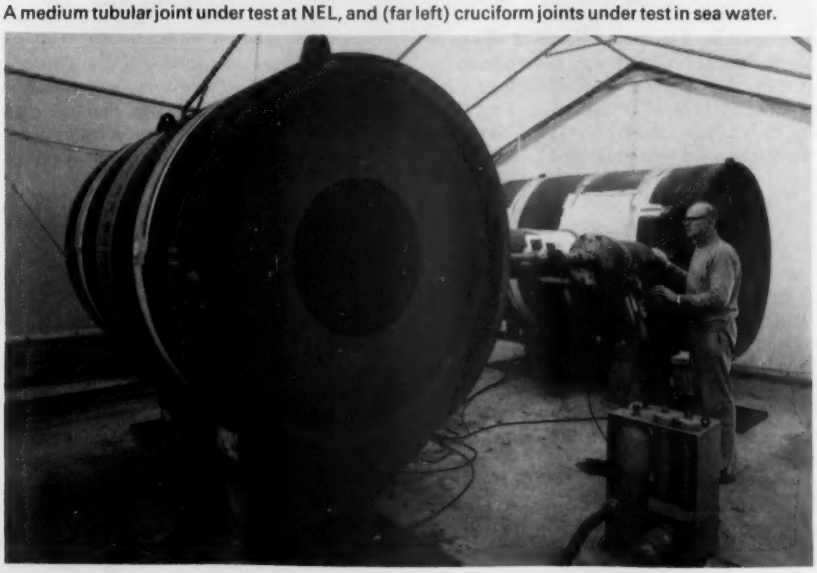
A total of 116 specimens of chord diameters of 168, 457 and 910 mm, with 12 different geometries, are being tested in air to obtain a comprehensive range of data on stress distributions and constant-amplitude and variable-amplitude fatigue data.

1.8 m diameter chord T-joints

Because of the size of the joints and the load requirements, the testpieces are designed in the form of a double-T or H configuration with the loading actuators acting between corresponding ends of the two chords, thus eliminating the need for a high-strength supporting test rig. A total of eight constant-amplitude tests are being carried out. Half the tests will be in-plane bending, using smaller actuators and the remainder axial loading, requiring the use of purpose-built ± 500 tonf actuators. Strain distribution measurements on the first testpiece have been completed and fatigue testing is due to begin shortly.

Ultimately it is hoped that these tests will help to ensure the integrity of the offshore platforms which are being used in the hostile environment of the seas surrounding Britain.

A medium tubular joint under test at NEL, and (far left) cruciform joints under test in sea water.



Noise control

People are now thinking about noise at an early stage so that buildings can be designed in such a way as to forestall the problem.

As an aid to treating whole buildings at an early stage of design, Noise Reduction Ltd of Eastleigh has developed a computer program which enables a noise map, rather like a weather map, to be drawn from details of the plant to be installed in a factory. It also allows engineers to assess different configurations of plant, and siting and silencing alternatives, giving an updated picture each time.

In this way the cost effectiveness of different noise measures can be decided before final planning decisions are made.

Further information: circle 716

Tilting windmill

A prototype variable-geometry, vertical-axis windmill has been demonstrated by Dr P. J. Musgrove at the University of Reading. This invention, which is the subject of a patent application, is being offered to industry by the National Research Development Corporation.

Since windmills utilise a free source of power, the cost of the electricity or work they produce is largely determined by the cost of the windmill itself. Windmills in which the blades rotate about a vertical axis have some important advantages. The windmill does not need to be directed to face the wind, unlike conventional windmills where the blades must be continually turned so that they face into the wind. The supporting tower can be slender and restrained by guy wires, unlike the heavy, expensive, self-supporting towers required for conventional windmills. And the straight blades can be constructed at low cost from such materials as wood, glass fibre or aluminium. These features make the vertical-axis windmill inherently lighter and cheaper than conventional windmills of similar size and performance.

Aerodynamically, the ideal configuration for a vertical-axis windmill is H-shaped. However, if the blades are rigidly attached to the cross arm, blade stresses become excessive at high wind speeds and the blades are liable to break.

In Dr Musgrove's prototype, the blades are hinged to the cross arm and the ideal H configuration is achieved at near average wind speeds when maximum efficiency is required. As the wind speed increases to above-average speed, the windmill is driven round faster, and the resulting forces acting on the blades make them incline away from the vertical. Tie wires running from the blades to a spring at the centre automatically control the blade inclination. Allowing the blades to pivot in this way limits the blade stresses, and in very strong winds the stresses actually decrease.

NRDC promotes the adoption by industry of new products and processes, advancing money where necessary to bring them to a commercially viable stage. Companies interested in developing and manufacturing windmills incorporating these features under licence are invited to contact Ian Grant, Mechanical and Civil Engineering Group, NRDC, Kingsgate House, 66-74 Victoria Street, London SW1E 6SL.

For a further description of Dr Musgrove's design see *Trade and Industry* 11 March 1977 page 621.

Diagnosis for divers

A unit the size of a cigarette packet which can give doctors an instant diagnosis of a diver's condition while still in a decompression chamber has been developed by Comex Diving Ltd, the Aberdeen-based North Sea diving contractor and engineering company, with the Medical Research Council.

The device, currently undergoing extensive tests in the Comex laboratories, is powered by a standard battery and utilises the infra-red telemetry principle. It is placed on the diver while he is decompressing and electrodes are attached to strategic points on the body to gather data on his condition.

The data is then transmitted by light emitting diodes in the pack in the form of infra-red waves and gathered by a triangular head end amplifier on the outside of the chamber. The waves are then translated for doctors to interpret.

This enables doctors to diagnose several aspects of a diver's condition in an emergency without them having to spend time compressing for entry into a chamber or, alternatively, waiting for the diver to decompress.

The use of infra-red waves eliminates the need for a 'direct line of sight' as the waves bounce off the wall of the chamber and are received, with little interference, through a perspex porthole. This means that the diver's condition is not endangered by having to move him.

This makes it possible for doctors to monitor several vital aspects of a diver's condition, determine body temperature, take an electrocardiogram, or test for eyeball movement of an unconscious diver.

The actual materials used in the device, known as the Infra-Red Telemetry Device, cost about £30.

This type of information has been obtainable in the past, but only using ultra high frequency radio waves, an extremely costly method which worked out at around £1,000 a unit.

The principle of the new system was developed by Clive Weller, a bio-engineer at the Medical Research Council, and the unit for Comex was designed and built to the company's specification.

Waste heat water for horticulture

Capillary blocks which provide an economical and easy way of utilising waste heat from power stations and other industries have been developed by Plantagent Seeds of Pickering, North Yorkshire, and are now offered for manufacture under licence as well as direct export. When used at power stations, Tana capillary blocks are placed in shallow troughs to which waste water is piped, providing a warm, flat, hard surface for plant containers.

The warm waste water rises by capillary action to the surface of the blocks and then by direct contact through holes in the container base to the root system of the plant. Channels in the blocks ensure the continuous free movement of the water and allow the warmth to be carried throughout the length of the trough.

Manufactured from a granulated rock material, the capillary blocks are capable of absorbing 80 per cent of their volume with water. Heat is stored and transmitted by the moving water and the capillarity of the blocks also provides free drainage. This feature enables the system to be used out of doors as there is an immediate run-off of rain water.

Another application for the blocks is in the building of roof gardens where, used in conjunction with turf and containerised plants, they drastically reduce the weight load on the roof by providing a convenient and easy means of sustaining growth without soil.

The blocks also provide an alternative to sand in greenhouse capillary benches.

Further information: circle 717

Smiths move into quartz time

Recent years have seen the rapid development of quartz crystal oscillator technology for use in wrist watch manufacture, and for specialist applications where long-term timekeeping accuracy is important. Now, Smiths Industries Clock Company has produced the first British quartz analogue clock movement for volume production, both for its own clocks and for the large number of other manufacturers who traditionally use Smiths movements.

Although Smiths cautiously estimate that it will be several years before quartz crystal movements oust the conventional transistorised balance movement as a general means of timekeeping, there is a rapidly-growing demand, both in Britain and overseas, for the lightweight (99g) movement with its far greater accuracy. Already, more than a third of Smiths production goes for export, and it is anticipated that the move into quartz technology, with its superior specifications, will allow significant expansion in overseas markets.

The accuracy of a quartz crystal time base is vastly greater than the conventional balance and spring; variations in rate at standard temperature are generally within two minutes a year, ignoring ageing, compared to the average of one minute per week obtained from transistorised battery movements using the conventional balance and spring.

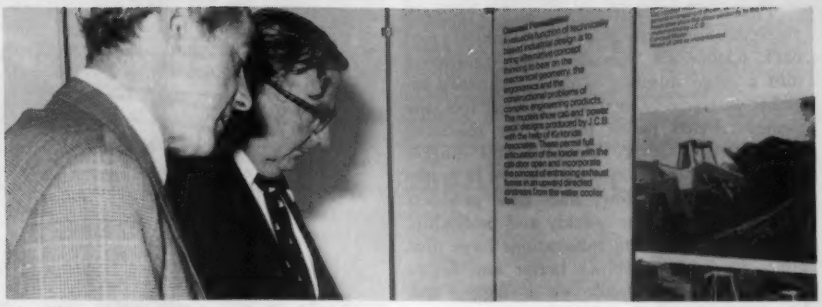
The new Smiths movement is based on a 1.5 V, 5.19 MHz crystal and an integrated circuit with low current, providing a battery life of at least 12 months.

Because the crystal used is the same as that employed in modern colour tv sets, they are available at very competitive prices. Thus the potential for high volume/low cost production is good, and unless technology changes, costs of the quartz crystal movement must improve against other types of construction as labour costs increase.

The Smiths Industries quartz crystal movement uses a stepping motor that rotates once in six seconds and consists of a magnet rotor and lamination pole pieces surrounded by a coil. The coil is energised once per second and the magnet has six individual poles and steps 1/6th of a turn per second. A pinion on the rotor is geared directly to the centre seconds wheel and the second hand moves in one second steps. The lamination pole shapes are designed to ensure correct directional rotation and to lock the rotor after each impulse. Timekeeping to current quartz standards has never been achieved in conventional horological design, even by high quality, hand-made clocks.

Two cultures

'We cannot carry indifferent design on the back of excellent invention' chief scientist warns as he opens the engineering specialists' exhibition



Alec Kirkbride of Kirkbride Associates talking to Dr Duncan Davies, chief scientist at the Department of Industry (right), at the engineering specialists' exhibition at the Design Centre, London, on 1 September.

In the field of engineering design, according to Dr Duncan Davies, chief scientist, Department of Industry, have been in the past faced with 'two cultures'. On the one hand we have, he says, ' "Aesthetic" designers, who, in the eyes of a caricaturist have long hair, mistresses, live in flats, drink coffee and wine, and if wealthy, have a place in the country. On the other hand, we have engineering designers who have short hair, wives and families, drink tea and beer, live in semi-detached houses, and, if wealthy, live in detached houses in the gin and Jag belt.' He identifies the former as designing furniture, jewellery, kinky boots and pedestrian precincts, and associates the second category with chemical plants, silicon chips, and oil rigs. There is, he admits, 'A slightly confusing area in the middle represented by aeroplanes, bridges, or roads, which the down-to-earth engineering designers have to build because the things in question must work, or not fall down, or not break up during frost. Surprisingly enough, they often look quite pleasing aesthetically, but again in the caricaturist's view, engineers have no aesthetic sense, so that such beauty can only be accidental. Because of the alarmingly widespread acceptance of these caricatures, and the much more exciting image of the aesthetic designer, there has been a natural tendency for engineering design to be left to the engineers, and for the two cultures to separate.'

This division of the field of design has not, he points out, always existed. 'Despite the thunderings of Victorian figures such as John Ruskin, the early 19th century engineers such as Telford, Stephenson, and later Brunel, were among the most important designers of large and very beautiful objects. Lord Clark in his television series on civilisation drew attention to the importance of engineers in the artistic achievements of what he calls "The Age of Heroic Materialism"; and there is no doubt that our Victorian grandfathers and greatgrandfathers saw the bridges over the Menai Straits and the Avon Gorge at Clifton as being great achievements both from the practical and artistic viewpoint.' This naturally raises the question as to how the engineering designer could subsequently have come to be underrated, if not totally ignored.

'Part of the reason may have originated in the activity of inventors, who created some rather sudden needs for the design of things which above all had to work. In an industrial society, one way of subdividing activities so as to understand them better is to look at the successive stages of invention, design and operation. Invention represents the major step in which (perhaps unexpectedly) a completely new industry may be opened up (such as air transport); subsequent enabling inventions then build on the initial great leap forward. Design is the assembly of capabilities to produce a well-considered and coherent whole after an invention has been made and is not confined to products or objects.

'The process for making them has to be designed, as does the factory, the flow of materials through it and the jobs of the people who work there. In due course it is also necessary to design the maintenance system for looking after the products after they have been sold. Operation consists of the purchase or winning of materials, the running of the factory, the selling of the products, and the execution of the maintenance in the world at large.'

Invention he sees as a riskier procedure than design, while operation remains a safer one. 'The inventors offer the world a bewildering array of mousetraps; in the end only a small number of these reach the consumer (or the mouse) so that the world is full of disappointed inventors, complaining that life is not fair. Once an operating system has been created, a very large amount of money has been spent, and many jobs are involved. Operation, therefore, cannot be set up until there is a high level of certainty that the products will work and will be bought at a price that is competitive and economical. Design is intermediate. There are many beautiful drawings of aesthetic objects (including those thought up by the engineer) which have never been made.'

As chief scientist, he sees himself responsible for a great deal of work on research and engineering, as well as for support for the Design Council, so 'I am obviously one of those who ought to be working hard on the reunification of aesthetic and engineering design. The demolition of the caricature views that I have mentioned and also integration of the innovation which springs from R and D with that which springs from imaginative design. What are the factors that are likely to help me to do this?

The Timber Research and Development Association is developing a new standard test for measuring the behaviour of materials in fire to be adopted by the International Standards organisation. Here fibreglass remains are being removed from the prototype test chamber after a test on a glass reinforced plastic sample. The project is on display at the engineering specialists' exhibition.

'First of all, the current changes in research emphasis are on my side. If we look 30 years back, science was injecting major innovation into a large number of craft industries together with some new ones. Entrance fees (the money needed to be put in for research, development, factory building and market development before a new product is profitable) were quite low, and new products followed one another quickly and profitably. As time has gone on, innovations have progressively had to replace better and better existing products, made on a bigger and bigger scale (and therefore cheaper). Consequently, entrance fees have increased and the attention of researchers has been deflected from major invention towards improvement, cheapening and increased reliability. Thirty years ago, design of factories, products, and service systems was done "on the run" and sometimes in a great hurry. Quite often, a new product would take over before designers had time to do very much with its predecessor. Engineers were in the same position. If they suggested that more deliberate design could improve the operation of factories or of maintenance systems, they would all too often be told that there was no point in devoting very much attention to this because products were changing too quickly. Both were urged simply to do the best job they could quickly, and broadly speaking, to do as they were told. Both lost much of the power and authority they had had during the Victorian age, and it is no accident that many objects during this period of rapid change now look rather cheap and shoddy. The architecture of the 1930s may be such an example.

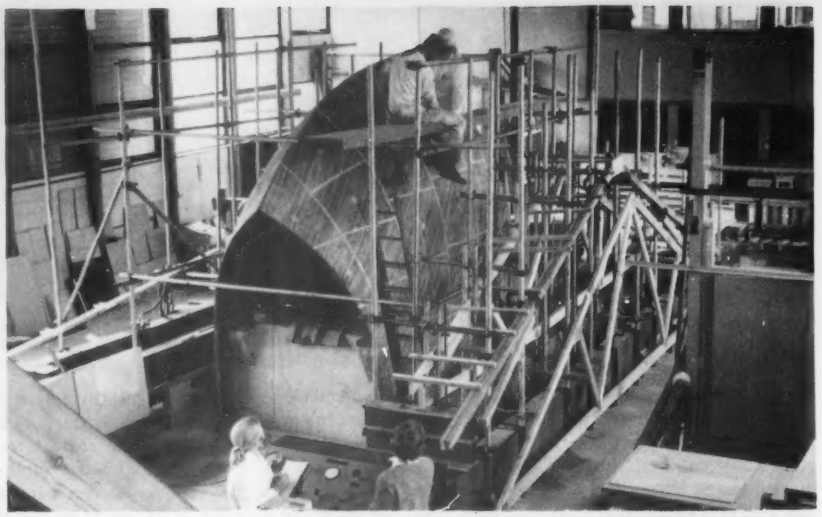
'Although large entrance fees are bad news for the inventor, they are good news for the designer and the operator and for the engineer. At long last, factory operations are becoming sufficiently stable for truly systematic work on design at all stages to be worthwhile. Engineers can begin to play a large part in their partnerships with the physicists and chemists (who are still vital contributors and should not think of themselves as being rejected).

'If we are seeking for examples of the benefits of good engineering design, we can find them in German engineering and in Japanese industry in general. The Germans have placed fundamental emphasis on engineering design and capabilities in mature fields (such as machinery) and have set "Technik" up on the same basis as science and art. The triangle which consists of the technological university, the technical institute, and the companies all in the same area has an integrated base of training, design, improvement, and operation that is impressive. The Japanese economic miracle has been based not only on imported inventions, but also on very competent and dedicated work and engineering design, for efficient operation and reliability. Their success in world markets has shown clearly how eagerly customers are prepared to buy things that are quite simply well-made, reliable, and of high quality. Now, the Japanese are turning their attention not so much to new products, but new applications of engineering design to processes. Their work on robotics and on very large-scale integration of silicon circuitry, are cases in point (although, of course, the highly sophisticated chip could also be regarded as a new product). It may well be that British genius for invention and the Japanese and German genius for design have some of their origins in national characteristics and genetic factors. But, if so, then we have to recognise that we have some learning to do that may not be altogether natural for us. For a time at any rate, we cannot carry indifferent design on the back of excellent invention in the way that we have done over the past decades.

'With these changes in the relative significance of invention and design, research needs to be associated increasingly with identified social needs and wishes, if possible without the loss of the touch of imaginative genius. This means that "market pull" has had to play a bigger part and "science push" a somewhat smaller one. The government research establishments, which have always been good at responding to needs in wartime, have therefore, turned over the past five years to a closer recognition of peacetime market needs, guided by the notions articulated by Lord Rothschild in his advocacy of the customer/contractor relationship and principle some five years ago. More and more design is evident in our research imperatives and initiatives.

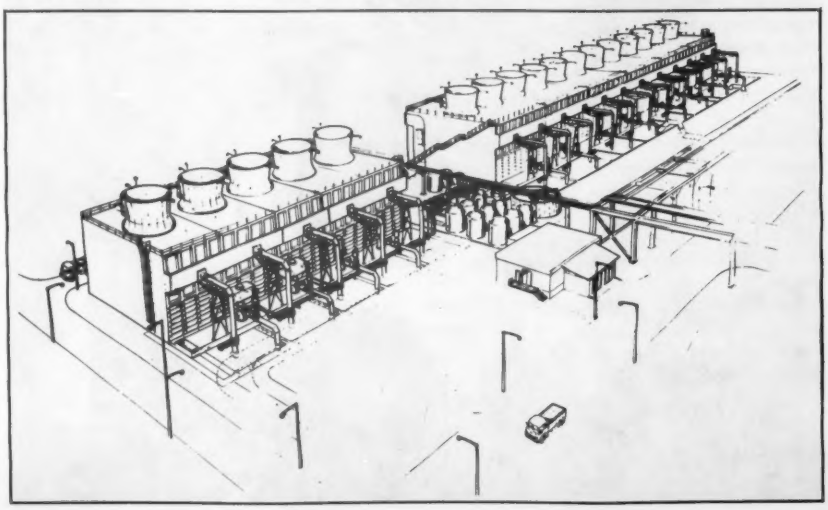
'From time to time people talk of a possible separate need for a new agency to sponsor engineering design, quite apart from the Design Council and the existing research councils. I am opposed to this, since I believe that we need to deploy the skills of the Design Council and the research councils more closely in concert, and a new agency could well get in the way. We, therefore, want to bring the staff of the Design Council more and more into our technological and general policy-making, and this is going ahead.

continued on next page



The Timber Research and Development Association acted as specialist adviser to the consulting engineers Rendel, Palmer and Tritton for the design of roof structures for the piers of the Thames flood barrier. The roofs are being constructed of laminated hardwood arches with three layers of softwood boarding. Here a fifth scale model of the roof is under test at TRADA's laboratories to prove the design before construction. This is also featured at the exhibition.

A joint venture formed by Giltspur Engineering Consultants and the Belgian company Hamon-Sobelco is working on the design and construction of a water cooling plant in Iran. Worth over £4 million and covering 30 acres, it includes 17 induced draught cooling towers. Giltspur is undertaking all other aspects of the cooling plant, including design and procurement of the pumping system, pipework and an electrical sub-station. Seven million gallons cool the fertiliser plant, which reaches a temperature of more than 800°C. Details are given at the exhibition.



'There does remain one major difference between engineering design and aesthetic design; some of the most beautiful of the engineering works will never be seen by the general public, whereas most of the aesthetic designers' work can. You can see the whole of an engineer's bridge but you cannot see the whole of the tunnel that is an alternative. You can see the symmetry of a wallpaper design but not of a silicone chip. It may be that we should make more effort to look deliberately at what the engineer is doing in the cases where we do not see it ordinarily or accidentally.' This type of education perhaps, could, Dr Davies believes, 'make a new and unique contribution to the re-establishment of the single and unified culture of the age of Telford, Brunel and Stephenson.'

Engineering specialists' exhibition at the Design Centre

Helping to transfer new technology from those who produce it to those who need it is one of the themes of the Design Council exhibition 'The Engineering Specialists' which is being held at the Design Centre, London, from 2 September until 8 October 1977.

It covers electronics, process plant design, product development and testing, management consultancy, engineering applications for timber and industrial design expertise.

There can be few machines as ungainly looking as heavy construction plant. But even these have been made to look more attractive and easier to operate by Kirkbride Associates without interfering with the ability to handle hard work under adverse conditions. An articulated loading shovel and a geared camera head for 35 mm cine cameras are both on display showing how improved design can be brought about by reconsidering the form and function of each component.

A design service which few engineering companies could hope to possess is available from Design Research Unit. On show are examples of successful industrial design projects which have satisfied performance and cost considerations. In one case, co-operation with Triplite Ltd produced a knitting yarn fault detector which not only looked good, but which by the clever 'snap-together' design of plastics mouldings reduced assembly time by more than half compared with an earlier detector.

Higher operational speeds of the modern railway system have directed the attention of British Rail research division towards improving information and safety systems. Electronics have been widely used and one exhibit shows the details of the transponder system to indicate speed restrictions to the driver of the Advanced Passenger Train, which will become operational during the 1980s. A working model of a radio warning system developed to improve the protection of permanent way staff is another and it shows how it warns of approaching traffic but ignores receding trains.

To cope with the complexity of electronic assemblies in a test situation the laboratories of Lucas Aerospace Ltd have developed a new generation of automatic test equipment, based on microcomputers, designed for use by unskilled personnel. The system is based on the Lucas modular microprocessor system comprising 12 function boards and some of these are on display.

Specialised facilities are available from IRD Ltd for plasma spraying, electronic beam welding, resin impregnation and the construction of instrumentation and test rigs. Hardware indicates the scope and potential of these services which are part of the wider activities in the IRD display.

Two current achievements are on show. One is the oil immersed dc motor developed in conjunction with Vickers Oceanics for use on Pisces submersibles. These motors are pressure tested up to 270 bar and can be produced for auxiliary or emergency propulsion for larger submarines. Also on display is a monitor designed to maintain the precise level of dampness on a lithographic printing plate to ensure good reproduction of printed matter. IRD also offer a range of environmental services which includes the monitoring of asbestos and air pollution.

Plessey Assessment Services, started to enable the Plessey Group to be sure that its products were of high quality and reliability, has been expanded to serve as an independent organisation with its own staff, facilities and security to ensure strict confidentiality.

One example is the Ventaire air freshener, designed and manufactured by Plessey Windings, which was the subject of thorough reliability analysis procedure before it was marketed by Rizla. Designed for intermittent automatic operation, the unit incorporates a small battery powered fan and a time switch both of which had to be completely reliable within the 12 month guarantee offered with the air freshener. Various versions of this neat and unobtrusive room air freshener are on display.

Test work on building materials associated with timber is carried out by Timber Research and Development Association which also advises on the uses to which different types of timber can be put. The potential for timber as an engineering material is often overlooked because its properties are not so well known or appear to be less predictable than steel. The mistake is often made that timber is less durable than steel and is a greater fire risk. These and other misconceptions about timber are dispelled by the TRADA exhibit which concentrates on the tremendous adaptability of timber in a wide range of industrial and commercial applications.

An increasing number of universities are enlarging their activities to include contract research and development and consultancy work. QMC-Industrial Research Group is based on Queen Mary College and its expertise includes materials technology, computer modelling of complex systems, medical engineering, instrumentation, offshore engineering and fire testing.

Novel ideas in instrumentation are developed for marketing and one such device is a Bat detector specially developed for a sophisticated investigation of ultrasonic bioacoustics with such mammals as bats and rodents. Less novel but vital in offshore engineering is a ground anchor suitable for securing a wide range of flotation equipment to the sea bed.

Giltspur Engineering Consultants offers a complete engineering design consultancy able to undertake full responsibility for a range of major construction and industrial projects on an international basis. Some impression of this range can be gained from a model of a cooling system for a fertiliser plant in Iran. Designed by Giltspur on behalf of an international cooling tower specialist, the project covered 30 acres and is capable of dealing with over 10 million gallons of cooling water an hour.

As management consultants to industry, commerce and public service, Metra Consulting Group are showing their capacity for studying market needs with a view to advising on the preparation of specifications. The Sensotherm convector heater on show is the result of such a study. The phial of BP's oleophilic solid, nicknamed 'moon-grease' because of its capacity to lubricate equipment in space, draws attention to Metra's capacity to find more down-to-earth applications for this product.

Vibration testing of a bilge oil content monitor by Plessey Assessment Services. The stroboscope is being used to locate any resonating components. Vibrations are induced by an electromagnet and transferred through a slip table. Frequencies from 5 to 5000 Hz can be induced and the equipment is capable of exerting a vibration thrust of up to 600 kg.

New products

Freepost reader service

For further information on items in this section, circle the corresponding number on the reader services page near the end of the magazine.

Lift for commercial vehicles

Tecalemit Garage Equipment Co Ltd, has announced the addition to its range of vehicle lifts of a new 16 tonne heavy duty unit known as the DSL4. Designed for the servicing of commercial vehicles and buses, the DSL4 is surface mounted and features four synchronised 3 hp electric motors, one on each column, operated by a single push button control.

The lift is 8.6 m (28 ft) long and 3.71 m (12 ft) wide overall. Vehicles of differing width are accommodated by lateral adjustment of the right hand track which is easily moved on torsion bars and rollers by one man. Maximum lifting height is 1.6 m (63 in) and the DSL4 is fitted with electronic height control switches on the lift tracks and crossmembers to ensure that the superstructure rises evenly during elevation and is maintained at the desired height without 'creep' during use.

A triple self-locking safety system is provided which meets the demands of modern servicing workshops and also satisfies all European safety regulations. The system comprises self-locking screws and safety nuts which immediately stop the lift if an obstruction is encountered. The semi-floating screws are suspended on hemispherical thrust bearings which ensure that the load on the safety nut is always axial.

Further information: circle 718

Preventing egg breakages

A see-through plastic super-egg the same shape, weight and size as a large hen's egg, has been invented by Dr Toby Carter of the Poultry Research Centre in Edinburgh, and is currently being produced by Forth Instruments Ltd, of nearby Dalkeith.

The egg, which took three years to develop, looks simple and yet produces remarkable results. Battery operated, it lights up to show how or where an egg might be damaged in handling.

It relies on two small mechanical transducers placed at right angles to each other. These are, in effect, simply vibrating springs with weights on them, which are activated by the motion induced in the egg as it goes through the various processes involved in the handling of the real article.

If the motion is violent enough to cause a crack in a real egg, contact with an adjustable, tapered metal wall creates an electrical pulse. This pulse is then transferred to a timer circuit and passes through two transistors and a resistor/capacitor circuit which controls the time base of the signal.

The mechanical and electronic core is encased in a crystal-clear plastic so that a red light which comes on when an unacceptably violent jolt is given to the egg can be seen at once. The device can be adjusted to light up when it is dropped anywhere between 4 mm and 12 mm – a distance which will crack any egg.

At £38 the super-egg, is now being promoted worldwide by the Egg Authority of the United Kingdom.

Further information: circle 719

Compact shaft speed monitor

Information on shaft speed for indication, control, interlocking and alarm initiation is provided by a compact, electronic shaft monitoring device made by Goodwin Engineering Ltd of Ellesmere Port. Simple to fit and suitable for operation under severe industrial conditions, the GEL shaft monitor, comprising a transducer and control module, can be fitted in minutes, has no mechanical linkages and is virtually maintenance-free. Applications include the control-monitoring of conveyors, pumps, process equipment, safety guards, positioning equipment, batching machinery and indexing mechanisms.

The transducer is an aluminium dye cast unit, roughly the size of a telephone earpiece. It is fitted by bolting-in to a hole drilled in the end face of the shaft, and securing a rubber restraining strap to a suitable part of the machine. The whole operation takes about 15 minutes. Housed in the transducer is a proximity switch which senses a serrated metal disc. The whole unit is sealed and totally encapsulated to prevent the ingress of water or dust. Sealed ball bearings are permanently lubricated. Speed range is 1 to 5000 rev/min and operating temperatures range is 0 °C to 40 °C. The standard unit has a 16 pulses/rev rate, but other pulse rates can be supplied for special uses.

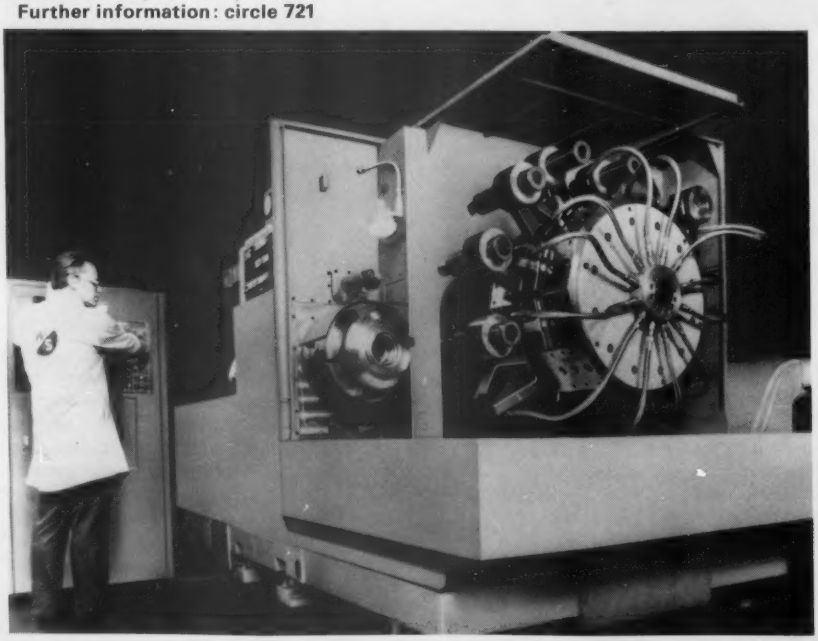
The control module, linked to the transducer by a high specification cable, can be located in any convenient position. It is compact – only 50 mm square by 105 mm deep – and sturdily constructed to withstand damage in harsh environments. It is linked to provide speed ranges from 1 to 10 rev/min, 10 to 100 rev/min and 100 to 1000 rev/min. Several types are available: a high/low speed trip module, a rev/min module, shaft index/position module, rev/distance/length count module, and safety interlock module. Non-standard modules and transducers can be made to specification.

Further information: circle 720

Larger lathes

Warner and Swasey of Birmingham has introduced the latest, and largest, addition to its SC series of column-type NC lathes which has been specifically designed for big chucking work. Typical applications would include oil industry equipment, heavy construction machinery, power transmission and fluid power components.

Further information: circle 721



European community news

Commission proposes changes for 1978 GSP

Discussions are in progress between the commission and the member states about the annual generalised tariff preference scheme (GSP) to be adopted for 1978.

While it may be generally assumed that the goods and the developing countries concerned covered by this year's scheme will also benefit from next year's scheme, no assurance can yet be given to importers about the actual details of the arrangements, for example the preferential rates of duty applicable to processed agricultural goods, the size and precise coverage of the tariff quotas or ceilings.

As soon as details are available in the *Official Journal of the European Communities* the information will be published in *Trade and Industry* and details will appear in due course in parts 10 and 11 of the customs tariff. It should be noted that any remaining UK transitional arrangements referred to in part 10b of the customs tariff and in earlier notices will not apply after 31 December 1977 [1].

The commission has recently presented its proposals for the 1978 scheme of generalised tariff preferences (GSP) [2] for developing countries. If the council adopts the commission's proposals, after negotiations between member states which may modify the projects, the volume of imports eligible for preferential treatment will be equivalent to 6400 million European units of account of which 5100 million EUA for industrial semi-manufactures and manufactures and 1300 million EUA for processed agricultural products.

The main features of the proposals for the 1978 scheme are a limited increase in the volume of imports which would be eligible for preferential treatment, the maintenance of the present annual limits on preferences for certain industries in difficulties, such as steel and textiles, and the emphasis on practical improvements in the operation of the system, particularly as it affects the least-developed countries.

The commission proposals remain within the scope of the offer on generalised tariff preferences made to the United Nations Conference on Trade and Development (Unctad) by the community in 1969, which the community was the first industrial power to bring into operation – starting on 1 July 1971. The commission notes in its communication to the council that in the present economic climate it is hard for the community to introduce substantial new improvements to the GSP, particularly since the community's industrialised partners have not made comparable efforts. For that reason, efforts will be concentrated on making practical improvements and the fullest possible use of existing concessions.

The following are the main outlines of the commission's proposals:

Agricultural products

It is proposed to add 11 new products to the list, among them horses for slaughter, certain kinds of crustaceans and molluscs, dried garlic, limes, tropical fruit cocktails and certain kinds of fruit and vegetables during the winter season. The new list would thus cover 307 products, representing a total import volume worth 1300 million EUA. It will be recalled that in 1977 the community substantially improved the GSP as regards agricultural products, in accordance with the community trade offer on tropical products made in the Gatt multilateral trade negotiations. The 1977 GSP for agricultural products added 46 new products and 70 margin of preference improvements to the 1976 scheme, raising the volume of imports eligible for preference from 1000 million to 1240 million EUA.

Industrial products

The GSP arrangements for industrial products involve duty-free entry for all industrial manufactures and semi-manufactures without exception, subject to annual ceilings which are equal to the volume of imports from beneficiary countries in a given reference year, plus an additional amount normally equal to 5 per cent of imports from non-beneficiary, ie industrialised countries. The 1978 scheme will use the same basic reference year (1974), but the figures for 1975 have been taken into account in calculating the additional amounts, which means that the general level of the annual limits would be raised. When the limits are filled, the normal rates of duty are or can be imposed [3].

For iron and steel, petroleum and textile products, footwear and plywood, it is proposed that the ceilings will be held at their present level in view of the difficult situation in the industries in question. In proposing that the status quo be maintained for textile products the commission is also taking account of the current negotiations for the renewal of the Multifibre Arrangement (MFA).

The commission is, however, proposing two changes in the operation of the system:

For 'sensitive' products subject to tariff quotas, which until now have been subdivided into national shares, the commission is continuing its policy of introducing an EEC reserve share aimed at increasing the usage of the quotas [4]. In the industrial sector, the number of quotas including a 20 per cent reserve share is increased from six to 12, excluding the quotas for plywood, textile products and ECSC products. It is proposed that there should be reserve shares for all agricultural products subject to tariff quotas.

For semi-sensitive and non-sensitive products subject to tariff ceilings it is proposed that the least-developed countries [5] be exempted in cases where there is re-introduction of duty in cases where tariff ceilings are exceeded.

In 1977 these countries already enjoy such exemption in connection with the maximum country amounts ('butoirs') – ie the maximum amounts that can be exported by a single beneficiary country, which are normally equal to 50 per cent, though sometimes to 20 or 30 per cent, of the ceilings. Special arrangements have also been introduced for these countries in 1977 reserving them 70 per cent of the ceilings of a large number of textile products, in contrast to more competitive countries.

Any general inquiries concerning the EEC GSP arrangements for 1978 should be addressed to CRE1, tel. 01-215 5470/5463. Inquiries to HM Customs regarding GSP should be made to International Customs J3 (tariff quotas and ceilings) at HM Customs and Excise, King's Beam House, Mark Lane, London EC3R 7HE; and to ICE 2 (regarding other GSP questions) at Adelaide House, London Bridge, London EC4.

[1] Details of the EEC's GSP for 1977 appeared in *Trade and Industry* 17 December 1976, page 792 and general information on the working of the scheme for 1977 appear in part 10b of the customs tariff available from HMSO. Details of the items covered under the 1977 arrangements were published in the *Official Journal* L349, 20 December 1976.

[2] COM(77)330.

[3] However, if the application of this rule were to result in a decrease in the duty-free amounts, the limit would be maintained at the present level. As regards products for which the calculations result in excessively high-growth rates, on the other hand, the ceiling increases will be limited to 50 per cent.

[4] The current industrial GSP covers 46 sensitive products, 131 semi-sensitive products and about 1700 non-sensitive products.

[5] Countries appearing on the list established by the United Nations resolution 3487 (XXX) of 12 December 1975.

More community news

Information on European community matters and about member states can often be found in other sections of *Trade and Industry*. For this week's additional news, turn to the following pages:

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Temporary suspension of the CCT

Details of existing suspensions of the CCT (common customs tariff) due to expire on 31 December 1977 and which will shortly be reviewed by the EEC commission, were announced in *Trade and Industry* on 22 July page 123. Details of requests for new suspensions of the CCT were also announced.

The Department of Trade has now been notified by the commission that requests have been made for greater reductions of duty with effect from 1 January 1978 on the following items all but one of which the CCT is already partially suspended until 30 June 1978.

Per cent[1]

CCT heading	Description	Proposed CCT suspended rate of duty
ex 03.01 B I q)	Sturgeons, fresh, chilled or frozen, whole, headless or in pieces, intended for the processing industry	0
ex 03.01 B I q)	Sardinops sagax, sardinops ocellata (pilchards), fresh, chilled or frozen, whole, headless or in pieces, intended for the processing industry	4
ex 03.02 A I c)	Anchovies (Engraulis spp) salted or in brine, whole, headless or in pieces, in barrels or other containers of a net capacity of 10 kg or more	0
03.02 A I e)	Salmon, salted or in brine, whole, headless or in pieces	0
ex 03.02 A I f) [1]	Saithe (Gadus virens), salted or in brine, whole, headless or in pieces	0
23.07 A	Fish or marine mammal solubles	0

[1] Duty previously partially suspended was restored at 1 July 1977.

Renewed requests have also been made for suspension of the CCT on the following items:

Per cent

CCT heading	Description	Proposed CCT suspended rate of duty
ex 03.01 B I h)	Cod, fresh, chilled or frozen, whole, headless or in pieces, intended for the processing industry	0
ex 03.01 B I i)	Coalfish, fresh, chilled or frozen, whole, headless or in pieces, intended for the processing industry	0
ex 03.01 B I k)	Haddock, fresh, chilled or frozen, whole, headless or in pieces, intended for the processing industry	0
ex 03.01 B I m) 2	Mackerel, fresh, chilled or frozen, whole, headless or in pieces, of a weight of not less than 400 g each, intended for the processing industry	0
ex 03.01 B I q)	Hake, fresh, chilled or frozen, whole, headless or in pieces, intended for the processing industry	0

The department will wish to take account of United Kingdom interests in making its views known to the EEC before decisions are taken whether to continue existing suspensions or grant the proposed new suspensions. Any representations either for or against the proposals should be sent to the Department of Trade, General Division, Room 332, Kingsgate House, 66-74 Victoria Street, London SW1E 6SJ, to arrive not later than 16 September 1977. Inquiries: 01-215 5519.

New legislation

The legislation listed below has been published in the *Official Journal of the European Communities* as indicated against each item. The *Official Journal* is published in English and copies should be obtained from HMSO. Information about the items listed, in so far as other member states' requirements are concerned, is available to British exporters from Department of Trade, Export Services and Promotions Division, Export House, 50 Ludgate Hill, London EC4M 7HU, tel. 01-248 5757, ext. 7174/482/409.

Common agricultural policy

The texts of the following regulations and decision which affect the various agricultural sectors in the EEC have been published in the *Official Journal of the European Communities*.

Poultry and poultrymeat. Regulation (EEC) 1868/77 laying down detailed rules of application for regulation (EEC) 2782/75 on the production and marketing of eggs for hatching and of farmyard poultry chicks (*Official Journal* L209, 17 August 1977).

Corrigendum. The *Official Journal* L209, 17 August 1977 contains the following correction to regulation (EEC) 2976/76 (published in *Official Journal* L339, 8 December 1976) laying down common standards for the water content for frozen and deep-frozen chickens, hens and cocks:

Page 8, paragraph 6.3:
for: '3.84' read: '3.82'.
Page 9, paragraph 4.5:
for: '1 444', read: '1 443'.
Page 10, paragraph 5.6:
for: '1 444', read: '1 443'.
Page 10, paragraph 6.2(b) and paragraph 6, 5, 2:
for: '3.36-34.5', read: '3.49-1.35'.
Annex IV, point 5.2:
The following sentence is to be added:

'Where the edible offals are to be incorporated with the meat in the material for analysis, both should be included in the term M_5; in such cases, M_4 would become zero in subsequent formulae.'

Oils, fats and oilseeds. Regulation (EEC) 1880/77 laying down detailed rules for the importation of olive oil from Lebanon (*Official Journal* L210, 18 August 1977).

Cereals and rice. Regulation (EEC) 1881/77 on the adjustment of import levies and export refunds fixed in advance on paddy rice and semi-milled rice (*Official Journal* L210, 18 August 1977).

Cattle, beef and veal. Regulation (EEC) 1892/77 on exceptional intervention measures to be taken concerning beef and veal and relating to certain regions of Italy (*Official Journal* L212, 20 August 1977).

Seeds. Decision 77/546/EEC authorising France to permit temporarily the marketing of seed not complying with requirements of council directive 66/401/EEC (*Official Journal* L216, 24 August 1977).

Commercial policy

Textile imports. The *Official Journal of the European Communities* L202, 9 August 1977, contains the text of regulation (EEC) 1827/77 maintaining, with certain amendments, the arrangements for the authorisation of imports into the community or into certain member states of cotton yarn and of garments originating in certain third countries.

The *Official Journal of the European Communities* L207, 13 August 1977, contains the text of regulation (EEC) 1860/77 making the importation into certain member states of woven fabrics of cotton and garments originating in certain third countries subject to authorisation.

Further information: Department of Industry, Chemicals and Textiles Division, Millbank Tower, Millbank, London SW1P 4QU, tel. 01-211 6023 (Egypt) 01-211 6128 (India) 01-211 4124 (Singapore).

Harmonisation of legislation

International transport of animals. The *Official Journal of the European Communities* L200, 8 August 1977 contains the text of directive 77/489/EEC on the protection of animals during international transport.

Further information: Ministry of Agriculture, Fisheries and Food, Hook Rise South, Tolworth, Surrey, tel. 01-337 6611 ext. 446/505.

Fertilisers. The *Official Journal of the European Communities* L213, 22 August 1977, contains the text of directive 77/535/EEC on the approximation of the laws of the member states relating to methods of sampling and analysis for fertilisers.

Copies of *Official Journal* L213, may be obtained from HMSO price £1.10 plus postage.

Further information: Ministry of Agriculture, Fisheries and Food, Eagle House, 90-96 Cannon Street, London EC4, tel. 01-623 4266 ext. 280.

Imports from non-member states

The *Official Journal of the European Communities* L215, 23 August 1977, contains the text of decision 77/542/EEC authorising Belgium, Luxembourg and the Netherlands not to apply community treatment to knitted or crocheted jerseys, pullovers, slipovers, twinsets, cardigans, bedjackets and jumpers falling within heading ex 60.05 of the common customs tariff, originating in Macao and in free circulation in the other member states.

Agriculture ministers to meet on Tuesday

EEC agriculture ministers, who were due to meet informally in Brussels on 12 and 13 September as guests of the Belgian presidency, will now hold a formal meeting on 13 September.

The formal meeting has been arranged to provide agriculture ministers with an early opportunity to discuss recent Danish proposals for a devaluation of the 'green Krone'. Originally their next formal meeting was scheduled for 26 and 27 September.

Overseas trade news

UK equipment for Indian paper mills

Britain has allocated £11 million from existing aid funds for India for the purchase of British equipment for two paper production projects in India.

A grant of up to £9.373 million has been approved for the purchase of equipment and associated services for the expansion of Mysore Paper Mills' Karnataka mill, 250 km from Bangalore. This £67.7 million project will raise the production of newsprint and other papers from 24 000 tonnes to 112 000 tonnes a year when completed in 1982. Britain will be the largest foreign supplier of equipment for this project, which is also being supported by West Germany and the United States.

In addition a grant of up to £1.7 million from British aid funds will be used for the purchase of British equipment for a £77 million newsprint factory being established near Cochin in Kerala State. The factory is planned to produce 80 000 tonnes of newsprint a year.

The project is also being supported by aid from West Germany and Sweden and will provide direct employment for 1800 people. Both projects are in line with Britain's current aid strategy in that the raw materials for the plant, eucalyptus wood and reeds, will be grown and harvested in, and transported from, surrounding regions, thus providing up to 14 000 jobs in rural areas to landless labourers.

Argentine economy minister visits UK

Argentine Economy Minister, Dr Martinez de Hoz, is making a private visit to the UK from 14 to 16 September.

He is coming primarily to open the first European branch of the Banco de la Nacion Argentina and to talk on Argentina's economic achievements over the last 17 months to a conference on Argentina being organised by the Confederation of British Industry on 15 September.

The nature and scope of his visit has, however, recently been expanded and he will now be meeting the Chancellor of the Exchequer and the Secretary of State for Trade. The minister will also be meeting a number of City bankers.

He will be accompanied by Ing. Brunella, the Secretary for Energy, Ing. Dumas, the Under-Secretary for Foreign Investment, and a trade mission of Argentine businessmen led by Dr Fraguio, the Argentine Secretary of State for Foreign Trade. The mission will be in the UK primarily to promote Argentine products, but will also be looking for UK partners in joint ventures.

Over 850 UK firms in West European fairs in September

A total of 889 British firms will be assisted by the British Overseas Trade Board to exhibit at 26 international trade fairs in western Europe this month.

An extensive range of British capital and consumer goods will be promoted, ranging from microcircuits and brewing equipment to cars and clothes. British consultancy and advisory services will cover equipping and developing sports centres overseas to providing project services for process plant abroad.

Over 500 000 visitors are expected to attend these 26 events which will take place in some of the most important cities in Europe including – Paris, Munich, Cologne, Vienna, Amsterdam and Copenhagen.

UK well represented at West German shows

Over 440 British firms will take part, with support from the BOTB, at six trade fairs in Germany this month.

Britain will be the largest overseas exhibitor at the Cologne 19th international trade fair of sports goods, camping equipment and garden furniture (Spoga) from 25 to 27 September. A total of 157 British firms – compared with 132 in 1976 – will take part within three joint ventures arranged in collaboration with the Federation of British Manufacturers of Sports and Games, the Camping Trades Association of Great Britain and the Leisure and Outdoor Furniture Association.

Another BOTB-backed group of 40 firms – 10 more than last year – will be at the international garden trade fair which will run concurrently with Spoga at the same exhibition centre in Cologne. This joint venture is organised in collaboration with the Federation of Garden and Leisure Equipment Exporters (Gardenex).

Also in Cologne, at the international fine

BOTB chief executive visits Nottingham

Jim Wilks (third right), chief executive of BOTB, with members of the management team of Bonser Engineering, Giltbrook, during a visit to Nottingham recently. He is examining a forklift truck which with dumpers make up the firm's output for agricultural, industrial and construction purposes. Bonser makes substantial contribution to exports from the east Midlands. During his visit Mr Wilks, who was accompanied by the regional export director, Gordon Plant, also met members of the staff of the export branch of the regional office of the Department of Industry which provides export services to firms in the east Midlands.

foods and provisions exhibition (Anuga) which begins tomorrow (10 September), BOTB is supporting 95 firms – compared with 59 in 1975 when this biennial event was held last. This joint venture is organised in conjunction with the British Food Export Council.

In Munich, at the international brewery and bottling exhibition (Interbrau '77) from today (9 September) to 16 September, there will be 33 British firms in two joint ventures with the Process Plant Association and the Allied Brewery Traders Association.

Another major joint venture will be at the Hanover international machine tool exhibition, from 20 to 29 September, when 67 firms will exhibit. This large British contingent will show a wide range of their latest machines and associated equipment.

At the Essen international welding and cutting fair, from 21 to 28 September, the BOTB joint venture of 28 firms is co-sponsored by the British Electrical and Allied Manufacturers Association. The substantial British participation reflects the importance British industry attaches to the event.

In Wiesbaden, at the second military electronic defence equipment exhibition from 27 to 29 September, there will be the first British display at this special high-technology event arranged in collaboration with the Electronic Engineering Association.

Japan becoming less insular, conference told

British businessmen going to Japan should take ample supplies of curiosity, courtesy, goodwill and patience. This point was made by John Barnes, a partner in the Abbey Horn Works, Kendal, who was one of six panelists at a North of England Development Council and Cumbria Export Club Japan export workshop held at Carlisle on 1 September.

Chief speaker was Hamish McGhie, the British Overseas Trade Board's special adviser on the Japanese market.

Mr McGhie urged the audience of 80 businessmen from all over the northern region to push hard at the Japanese market which should be worth well over £1 billion by 1985. The insularity which had acted against firms trying to get goods into Japan was changing and the Japanese economy was about to be reflated, he said.

Mr Barnes and Michael Hackett, chairman and managing director of the Lindisfarne Liqueur Co – both of whom have been on BOTB-backed trade missions to Tokyo, paid tribute to the 'excellent, energetic and speedy help given by the commercial staff of the British embassy in Tokyo. They were first class,' said Mr Hackett.

Construction mission from Greece

Organised by The Building Centre Group and the British Overseas Trade Board, the fourth inward mission of the Building Centre Group's 1977 programme will be from Greece and will take place from 31 October to 4 November.

Invitations are being issued by the British embassy in Athens to building and engineering contractors and architects to be represented in the mission.

Greek building and engineering contractors and architects are extremely active in the Middle East and the firms being invited are concerned with contracts in Saudi Arabia, Iraq, Syria, Nigeria, Gabon, Cameroun etc.

The mission programme will be based on The Building Centre's usual pattern. Those taking part will attend an informal conference on the Monday morning, where the visitors and other speakers will provide background information about the market in Greece and its construction industry.

British manufacturers, contractors and consultants wishing to receive further information about this mission should contact W. Bridge, Head of the International Section, The Building Centre, 26 Store Street, London WC1E 7BT, tel. 01-636 1197.

At the conference (from left to right) Frank Teasdale, director Whessoe Systems and Controls; Dr John Bridge, North of England Development Council and chairman of Workshop; Hamish McGhie; Michael Hackett, chairman and managing director of Lindisfarne Liqueur; Jim Grant, marketing director Allen Bradley Electronics; Arthur Parlin, export sales manager Thermal Syndicate; Ralph Watson, executive manager Hall Thermotank; Michael Melia, chairman, Cumbria Export Club.

Notices to importers

Issued by the Department of Trade, Import Licensing Branch, Charles House, 375 Kensington High Street, London W14 8QH. telephone inquiries should be addressed to the number at the end of the notice.

1633: Imports from Vietnam

Following publication in the *Official Journal of the European Communities* of council decision 77/413/EEC, community import arrangements which applied to what was formerly North Vietnam have now been extended to the whole of Vietnam. The following quotas have now been opened for the United Kingdom for the calendar year 1977:

Category no./tariff heading/ description of goods	Quota (£000)
1/51.04 Woven fabrics of man-made fibres (continuous), including woven fabrics of monofil or strip of heading no. 51.01 or 51.02 **56.05** Yarn of man-made fibres (discontinuous or waste), not put up for retail sale **ex 62.02** Bed linen, table linen, toilet linen, kitchen linen, curtains and other furnishing articles wholly or mainly of woven cotton, of man-made fibres, of flax, of ramie or of hemp.	15
2/69.11, 69.12 Tableware and other articles of a kind commonly used for domestic or toilet purposes, of porcelain or china (including biscuit porcelain and parian) or of other kinds of pottery.	20

Licensing arrangements

Traders seeking an allocation to import such goods originating in Vietnam during the remainder of 1977 should apply not later than 23 September 1977 to Import Licensing Branch at the address shown above on form ILB/A and should state the value of goods they wish to import during the rest of the year. Applications should be accompanied by a statement of past trade by the applicant for each of the years 1974, 1975, 1976 and from 1 January to 30 June 1977, supported by a report by a qualified, practising, independent accountant. Pro formas for this purpose are available from Import Licensing Branch and applications will be dealt with only on receipt of correctly completed forms.

Letters of credit

Traders are reminded that current exchange control regulations in respect of goods subject to quantitative restriction prohibit banks from opening letters of credit, or amending those subsisting unless they are satisfied that a valid import licence has been issued for such goods.

Inquiries: Import Licensing Branch, tel. 01-603 4644 ext. 280.

MARKET REPORT: SPAIN

Now that the barriers are down

During the last few years Spain has experienced a series of brisk changes – political, constitutional and economic. Ralph Skilbeck, first secretary commercial at the British embassy in Madrid, explains how these developments, particularly the growing relationship with the EEC, could give a new edge to UK exports.

Political and constitutional changes have recently kept Spain in the international limelight. Great interest has been taken in the constitutional developments since the death of General Franco in late 1975 culminating in the first general elections for 41 years, which have given the country a parliamentary government under Prime Minister Adolfo Suarez. Internationally one of its first actions was to apply, on 28 July, for full membership of the EEC. Earlier in July, to rectify the imbalance on Spain's international trade the government devalued the peseta by 20 per cent and, as a measure of trade liberalisation, removed the one-fifth surcharge on most tariffs imposed last October.

One other element in this picture of brisk change makes a focus on Spain from a specifically UK angle particularly appropriate. This was the agreement, which took effect on 1 July, by which Spain reduced her tariffs on exports from the UK – and Denmark and Ireland – to the levels already applied to the original six EEC countries (see *Trade and Industry*, 15 July 1977, page 65). The extra edge this gives to many UK exports to Spain, with the prospect of further advantages the EEC may obtain in 1978 and after, fully justifies a closer look at the state of Spain today.

For many Britons the coastal resorts of Spain are the most familiar holiday destinations on the continent, but back in their places of work they may be less familiar with the scope of the market Spain offers than with some more distant markets. Many years ago, when Spain tended to keep rather aloof from the rest of Europe, this was understandable. But the development of the last 20 years brought Spain's economy closer to west European levels: her income per head is now close to that of Italy. And the establishment of parliamentary government and the application to join the EEC demonstrate that the old barriers are down.

Spain is the second largest country in western Europe and the fifth most populous, with 35 million inhabitants (see table). Agriculture remains a vital basis of both her economy and her society, still employing 20 per cent or so of the working population and contributing in major degree to Spain's income from abroad through the sale of citrus fruits, vegetables and wine.

Urban society

But at the same time Spain has swiftly become a very urban society. A largely radial system of communications links the capital, Madrid (3½ million population) with the other major centres – Barcelona (also over 3 million), Valencia, Bilbao and Seville, all of whose metropolitan areas have a million or more people.

Industry, commerce and services are the mainstay of the urban economy. For over a century Spain has had textile, mining, coal and steel industries, but their scale and technology have advanced greatly in the last 20 years. Moreover the introduction of newer but now strong industries such as vehicles, chemicals and shipbuilding and the third largest nuclear power programme in Europe has spread development, often through government decentralisation policies, to smaller centres. As a result, although the northern and eastern areas of the country remain the more industrialised, and in the main the more prosperous, most areas have developed in some degree. Some, particularly the Mediterranean coast and the islands, have of course developed mainly thanks to Spain's largest and most successful service industry – tourism.

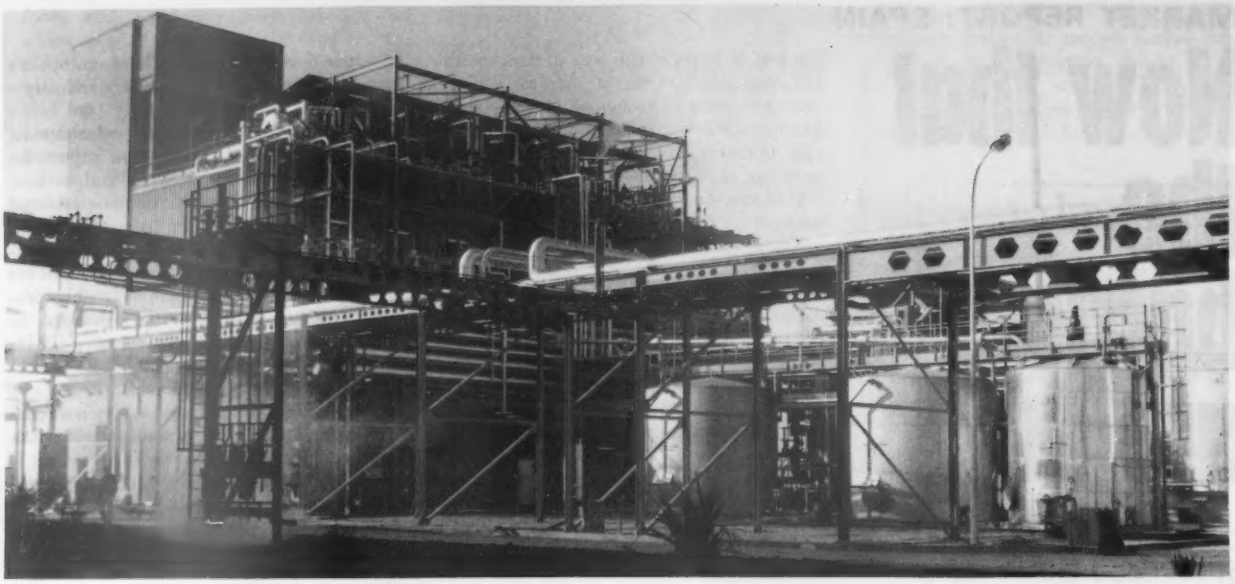
As Spain developed her own industries she tended to grow less dependent on imports for her basic manufactured needs and to look abroad primarily for the raw materials and sources of energy which she lacks, though also for the relatively more sophisticated components and products which she could not yet produce. Initially and understandably protective quotas or high tariffs were used, in many cases to restrict imports of products which Spain was beginning to make herself. Now, however, many of these industries have become strong competitors in international markets and can therefore more readily face competition in Spain. In the future also it is hoped that the steadily closer relations between Spain and the EEC will mean further reductions in the remaining obstacles facing the exporter to Spain.

UK-Spain trade

The current pattern of trade between the UK and Spain indicates how much more sophisticated trading exchanges have become. Although agricultural products still represent the largest single element of Spain's exports to the UK, manufactured goods now account for a large proportion each year. The UK, as in the past, sends to Spain mainly manufactured goods, particularly chemicals, engineering products, and machinery and transport equipment.

British exports totalled £410 million in 1976, giving a market share of slightly above 5 per cent, but so far in 1977 are already over 30 per cent in value above that level. The reduced tariff levels since 1 July should give a further boost to these figures, although the devaluation of the Spanish peseta may of course have a general dampening effect on imports. The tariff on some types of products

The new Ford plant, built by Laings, at Almusafes near Valencia.



The new polyester plant of Nurel SA, an ICI associate at Zaragoza.

will be reduced by as much as 60 per cent and, on many types of manufactured products, by a quarter; it will remain unchanged on less than a fifth of UK exports, by value. The following list gives an impression of the products which already figure significantly in UK exports to Spain and which will now enjoy worthwhile reductions in tariffs:

Many chemical products	Some printing machinery (84.35)
Films in rolls (37.02)	Taps, cocks and valves (84.61)
Some types of fibres	Ignition systems for cars (85.08)
Tools, internal combustion engines (84.06) and other engines	Radio transmission equipment (85.15)
Pumps (84.10) and air pumps (84.11)	Fork lift trucks (87.07)
Excavating machinery (84.23)	Electrical measuring, checking and analysing instruments (90.28)
Harvesting machinery (84.25)	

Looking beyond the tariff categories at the broader range of general opportunities Spain should now provide, the priorities likely for social and health expenditure, energy saving and agricultural development and the development of the retail sector are worth picking out. Good opportunities exist especially in agricultural machinery, health and medical equipment, packaging equipment and many types of quality consumer goods.

Approaching business

Although the traditional approach to business through finding a good agent will usually remain most appropriate for new entrants to the market, it is now more and more practicable to see marketing in Spain, like Belgium or Denmark, as an extension of a company's general European marketing. Since distribution in Spain is fairly centralised, Madrid or the three or four other major centres remain the most likely effective candidates either for a company's own base or as sources of agents. The important Canaries market (traditionally strong for UK consumer goods and enjoying a duty-free tariff regime) should in many cases be handled separately.

Other types of opening to the market, particularly for consumer goods, which should not be overlooked are, first, the important position of the major department store groups, which may be direct outlets; and, second, the possibility of using UK companies already in Spain to market products for which a separate network would not immediately be justified.

The alternative to an agency relationship, which many firms find satisfactory in order to establish a direct stake in Spain's economy, is through manufacture under licence, or direct investment, either majority controlled or 50/50 with a Spanish partner. Industrial and commercial companies and industrial (merchant) banks are often willing partners in such joint ventures. Majority investments require government permission but this has not recently been difficult to obtain for well-conceived proposals. Foreign investment is probably more welcome to the Spanish authorities than MUL agreements and other technology transfers. Moreover it can also be more profitable for the foreign partner, as many American and German firms, in particular, have found.

In any commercial relationship with a Spanish partner it is important to maintain the contacts by personal visits, and by using Spanish where possible in correspondence. A personal touch is particularly appreciated in this friendly country. Style is also important. The Spanish market, while as price-conscious as any, puts particular value on modern and elegant appearance, including industrial products. Delivery access to the market is straightforward through various ro-ro road services, particularly to the north-coast ports, other TIR and rail services through France, and airfreight.

British firms seeking British contacts in Spain will find that a number of UK banks and accountants have representation, and there is a British chamber of commerce with centres in Madrid, Barcelona, Bilbao and Valencia.

Market information

For information about the Spanish market and for help when visiting Spain, exporters are welcome to contact the commercial office at the British embassy in Madrid, and other posts at Algeciras, Barcelona, Bilbao, Las Palmas and Vigo. The British Overseas Trade Board (Export House, 50 Ludgate Hill, London EC4M 7HU) and its regional offices will usually be able to provide a good deal of assistance, and they should be consulted before departure if possible.

Spain: a few facts and figures

Area 504 750 km²

	1970	1976
Population	33.6 million	35.8 million
Gnp	2 575.3 ('000 million pesetas) 15.3 ('000 million £)	(1974) 4 940.6 ('000 million pesetas) 36.6 ('000 million £)
Exports (fob)	167 198 million pesetas (£995 million)	583 222 million pesetas (£4 848 million)
Imports (cif)	332 301 million pesetas (£1 978 million)	1 169 412 million pesetas (£9 720 million)
Exports to UK (fob)	14 741 million pesetas (£88 million)	42 268 million pesetas (£351 million)
UK exports to Spain (fob)	£143.1 million	£410.7 million
Production		
Electricity (kW/h)	55 908 million	90 595 million
Steel (tonnes)	7 392 000	10 989 000
Cars (units)	442 159	744 973
Public sector housing (units)	185 294	162 294
Ship construction (grt)	931 950	1 483 636
Cement (million tons)	16.5	24.9

Rates of exchange used
1970 – pesetas 168 = £1
1974 – pesetas 135 = £1
1976 – pesetas 120.3 = £1

Overseas trade exhibitions

Casual wear in focus at Cologne fair

From the British embassy, Bonn

At the latest international men's fashion week held from 21-23 August in Cologne, 12 British firms displayed quality menswear on a joint stand organised by the British Overseas Trade Board and the British Menswear Guild in association with the Clothing Export Council. Although the number of joint-venture exhibitors has declined over recent years, the importance of this fair was again emphasised by the repeated presence of some firms and participation of others for the first time.

As well as exhibiting to the 32 000 visitors, 33 per cent of whom were foreign, British firms faced their 575 competitors from Germany and 371 competitors from the rest of Europe and elsewhere in a market which is itself the world's biggest exporter of textiles. Visitors were offered 76 000 m² of goods the focal point of which was casual wear, followed by men's outerwear, trousers, jackets and suits (jeans were in eighth place within the product ranges displayed).

The value of exhibiting at the men's fashion week as seen by UK firms varied, as did their reasons for participating. Some British firms were well pleased, particularly on the leatherwear side and will return to Cologne. Others were satisfied with orders or contacts made. Above all the UK contingent recognised the need to come and be seen by German and other European buyers.

This was the first time that the fair has begun on a Sunday. General opinion, however, may well force the return to a Friday start. The timing of the fair was also discussed and there is a lobby which would prefer the exhibition to be held 7 to 10 days later in the month.

Fair strengthens UK position in Australian market

From Jack Richards, British consulate-general, Melbourne

Australia's tenth international engineering exhibition (AIEE '77) was held in Melbourne 25 to 30 July.

There were eight nationally-sponsored stands. The British pavilion, organised by the British Overseas Trade Board, occupied 1000 m² in the western annex. The products on display of some 48 British companies amply proved the diversity and range of the British engineering industry. A total of 14 British and 15 Australian-based companies, who represented British manufacturers, occupied stands in the pavilion.

Products covered an extensive range, including lathes, milling and grinding machines, pumps and motors, fastening systems and gas burner equipment.

To coincide with AIEE '77 the Engineering Industries Association sponsored its fiftieth trade mission. The 16-member mission was led by Frank Smith, chairman of the Engineering Industries Association Export Council.

Machine tools attracted particular interest and 600 Machinery (Australia) Pty Ltd, A. A. Jones and Shipman and Adcock and Shipley all reported good sales and expect substantial further orders.

EMI-MEC encountered great interest in their auto-spring series 'S', programme controlled capstan lathe displayed for the first time in Australia by their agents Modern Tools Pty Ltd.

Another success was achieved by NIS Marketing (Australia) Pty Ltd with their F and R range of slide gate and rotary valves. Orders for these valves in excess of $20,000 had been placed at the middle of the exhibition.

A high inquiry rate and good results were also recorded by KDG Instruments Pty Ltd for their wide range of industrial instruments, Metallisation Ltd for their arc spraying equipment, Lucas Fluid Power for their Lucas HD series axial piston pumps and Warwick Pump and Engineering Ltd for their high-pressure washers. All this increased interest indicates a wide acceptance of British products in the Australian market.

The standard of inquiries received was particularly gratifying and it is not surprising that a number of companies, fired by their success in Melbourne, have already announced their intention of taking part at next year's exhibition which will take place at Sydney's Royal Agricultural Society's showgrounds, 11 to 16 September 1978.

The British consulate-general in Melbourne, who co-ordinated the display, confirm the success of the British pavilion; the pavilion terms (initially introduced last year in Sydney) undoubtedly contributed once again to this success.

Participation by Australian-based companies more than doubled this year and exceeded the number of British companies who took part. All exhibitors agreed that the success of the event had strengthened the position of British engineering suppliers in the Australian market.

In his opening address Senator Robert Cotton, Federal Minister for Industry and Commerce, declared that now was a most fruitful time for Australian industry to recapitalise with the newest and most advanced products and techniques on display at the exhibition. He mentioned the 40 per cent investment allowance as a strong incentive to provide investment and he believed the stimulus would carry through after the first phase of the scheme expired on 30 June 1978. Plant ordered between that date and 30 June 1983 would attract the investment allowance at the rate of 20 per cent.

UK display appropriate to NZ needs

From Mr T. E. Martin, British consulate-general, Auckland

Sixty firms showing the products of over 180 British companies exhibited a wide range of capital and consumer goods in the British pavilion at the New Zealand international trade fair which took place at the Epsom showgrounds in Auckland between 19 and 27 August. The original demand for exhibition space in the pavilion was so great that it was necessary to increase its size by about a third. An extension was constructed and the overall display area was increased to some 3000 m². This resulted in the largest display of British goods ever exhibited in New Zealand. Products included motor vehicles, machine and hand tools, materials handling equipment engines and high-quality household items including textiles, china and glassware.

Although six days of the fair were specially reserved for trade visitors the showground authorities estimate that about 100 000 people passed through the gate to see the

Mr R. D. Muldoon, Prime Minister of New Zealand (second left), on the Atlantic Conveying Equipment stand looking over a conveyor belt displayed by Rex Consolidated on its stand.

displays of products of a total of 25 countries. But local opinion indicated that the British pavilion and its displays were probably the finest and most appropriate as they took proper account of New Zealand's current and future commercial requirements.

British exhibitors were well satisfied with the volume of business transacted and the number of inquiries received. Business was brisk from the moment that the British pavilion opened. For example, Leyland chalked up sales of two Jaguar XJ6 cars, later followed by a NZ$120,000 order from a fleet operator for its newly-introduced Princess 1800 saloon car. Ford was also busy dealing with inquiries for the new-style Cortina. British Seagulls local agents obtained a NZ$50,000 order for a container-load of its popular outboard engines. Lansing Bagnall was soon handling orders for side loaders and trucks. On an impressive stand of Colchester Lathes demonstrations created great interest among potential buyers and the sale of a Harrison automatic lathe on another stand was concluded.

By the time the British pavilion finally closed its doors hundreds of thousands of dollars worth of business had been transacted, including over NZ$150,000 each for materials handling equipment and textiles, NZ$200,000 for machine tools, and NZ$100,000 for vacuum and storage containers alone among the many consumer items on display.

The British pavilion was visited by several New Zealand ministers, including the Prime Minister, Robert Muldoon. The Minister of Health, Mr F. T. Gill, also made a short visit.

On Wednesday, 24 August, the British Minister of Agriculture, Fisheries and Food, John Silkin, was guest of honour at the British national day reception attended by over 600 local businessmen. With him in the official party were New Zealand's Minister of Agriculture, Mr D. MacIntyre, and Mrs MacIntyre.

Demand exceeds space at Pacific jewel show

From Robina Colville, British consulate-general, Los Angeles.

Four hundred manufacturers of fine jewellery exhibited at the 20th annual Pacific jewellery show in Los Angeles from 20 to 22 August. This is an annual west coast regional show which has steadily grown in importance over the years and attracts retail jewellers not only from the western states but also from all over the country.

It is of special importance to smaller retailers scattered throughout the more remote areas of the country who do not have the opportunity to travel to the East Coast shows or overseas. The more sophisticated buyers visit the show to look but tend to make arrangements to meet with the exhibitors after the show in the greater seclusion of their own offices. Thus many valuable contacts can be made at the show and this was the experience of the six British manufacturers who exhibited under a joint venture between the British Jewellery and Giftware Federation and the British Overseas Trade Board. All of them were satisfied with the results and in some cases booked space for the 1978 show before returning home.

The show is strictly limited to trade buyers and more than 4000 buyers attended over the three days.

For several years the show has been held at the Century Plaza Hotel which, for the duration of the show, is completely taken over in terms of display space, sleeping accommodation and restaurants.

Space was not sufficient to take care of all applicants and among those turned away were four British companies who otherwise would have swelled the joint venture group.

With this pressure on space, it will be clear to any British manufacturers of precious jewellery and dealers in stones, who want to participate in 1978, that applications should be lodged really early – immediately is not too soon.

UK equipment to the fore at Febs

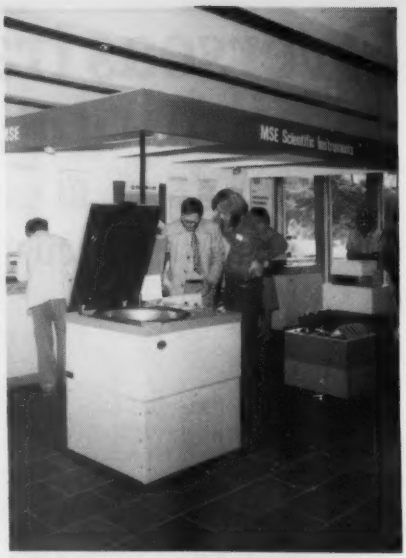
From Mogens Helle, British embassy, Copenhagen

Nearly 3000 scientists assembled in Copenhagen for the eleventh meeting of the Federation of European Biochemical Societies (Febs) held from 14 to 19 August. Denmark's new technical university at Lyngby, on the outskirts of Copenhagen, provided an ideal venue for the meeting.

As is common with these annual Febs meetings, this congress was combined with a technical exhibition of the products of some 60 international firms.

A very prominent part of the exhibition was a joint venture made up of 15 exhibitors and sponsored by the British Laboratory Ware Association and the British Overseas Trade Board. The area occupied, next to the main congress hall and the congress service centre, put British equipment to the fore and exhibitors reported a proportionally high rate of attendance. Many exhibitors were delighted at having had an opportunity to demonstrate their equipment to scientists in particular from eastern Europe and, despite the name of the congress, from places as far away as New Zealand, Japan, India and the Middle East.

Although, as usual at this type of exhibition, very few actual orders were taken, the number of serious inquiries exceeded expectations and made participation well worth the effort. Notably MSE Scientific Instruments.



MSE Instruments' stand. The company estimates that it picked up about £250,000 worth of business in the short-term at the Febs fair.

showing a range of centrifuges, estimated the short-term result to be around £250,000. Universal Scientific and Birchover Instruments also did well with firm inquiries representing a total around £20,000 to £40,000 for each company.

All exhibitors taking part in the joint venture were very satisfied with the event particularly the contact established with leading international scientists.

Some exhibitors made the interesting comment that the delegates appeared to move about the British stands more freely than usual. Each stand, constructed with two walls instead of the traditional three, provided a passage between the congress hall and the garden. Some visitors to exhibitions, and especially scientists, are reluctant to be subjected to high-pressure salesmanship and hesitant to enter the stands. This was not the case at this joint venture – exhibitors reported a high attendance of interested delegates; perhaps this was because each stand had two exits. Also the open British stand construction added considerably to the easy and relaxed atmosphere at the congress.

The success of the joint venture was endorsed by leading British scientists from the congress who met the UK exhibitors at an informal get-together given by the commercial counsellor, Guy Simmons, at the British embassy.

trade promotions guide
Trade and Industry
quarterly guide
will be published with the
14 October issue

Overseas trade export services

Pandair moves to new Cargocentre

International air-freight forwarder Pandair began operations on 5 September from the new Cargocentre complex which has been specially built for it on a site near to the old Heston airport and close to Heathrow. The whole of Pandair's facilities serving Greater London and the south of England will soon be under the same roof.

These are currently operating from a number of locations within a 10-mile radius of Heathrow from where they will progressively move at weekly intervals into the new Cargocentre.

The first to move in were Pandair's consolidation unit and also the specialist services unit, which deals mainly with ships' spares and other emergency traffic, which are both currently based at Armdale Road, Feltham.

On 12 September, the London imports section will transfer from East Bedfont, followed on 19 September by the London exports unit from West Drayton.

Finally, on 26 September, Pandair's charter division, EMG Air Services, will move into the Cargocentre from its premises at Colnbrook.

The only unit that will continue to operate from its present premises, in building 521 at Heathrow Airport, will be Pandair's break-bulk and transhipment unit, which needs to be retained on the airport so as to have direct access to the Laces customs facility for the rapid clearance of import traffic.

The Heston facility, which has taken just over a year to construct since excavations started on the 2.5 acre site provides Pandair with 70 000 sq ft of undercover accommodation, of which approximately 52 000 sq ft comprises the warehouse operations area.

Further information: circle 722

Autotelex starts to Libya

Britain's telex links to Libya went automatic on 18 August. This brings to 109 the number of countries which the UK's 65 000 telex users can contact direct.

An autotelex call to Libya costs 2½p for every six seconds – equivalent to 25p a minute. The charge for operator-connected calls is 75p every three minutes. VAT is extra on these charges.

British firms have been making about 5000 telex calls a month to Libya, connected by international telex operators.

To make direct telex calls to Libya, users should follow the 'A' procedure given in the preface of the current telex directory – dialling the country code and then the Libyan subscriber's five-digit number. The country code to use depends on the caller's own UK telex number, as follows:

for UK telex numbers beginning 21-28, it is 2081
for UK telex numbers beginning 88, it is 8081
for all other UK telex numbers it is 0081.

Further information: circle 723

Freepost reader service

For further information on items in this section, circle the corresponding number on the reader services page near the end of the magazine.

Cast to carry Royal Mail

Cast Transportation has been appointed by the Post Office to carry the Royal Mail between the UK and Canada.

With approximately 500 trailer equivalent units a year, the mail contracts is awarded annually and runs from 1 September 1977 to 31 August 1978.

Cast has provided a UK container service for a number of years, using a feeder operation to connect with its Antwerp/Montreal transatlantic services. In January 1977, the company began a direct Liverpool/Montreal service, giving UK shippers and consignees a door-to-door service at a very competitive price.

Further information: circle 724

To Ireland in 24 hours

Davies Turner has begun to run a ro-ro trailer groupage service which, the company claims, gives much faster overall transit times – in the region of 24 hours – to the Irish Republic. The service is operated in conjunction with Reindear Shipping.

Davies Turner trailers arriving at Dun Laoghaire have a bond posted for customs clearance at Reindear Shipping's warehouse. The warehouse has a customs officer on site and clearance is usually effected within 48 hours.

Cargo for this service is consolidated at Davies Turner's London depot and trailers leave for Holyhead – the main transit port – twice a week. A similar service is run through the company's Birmingham branch.

Further information: circle 725

News of services for exporters

If your company has recently introduced a new service for exporters – in, for example, the packing, forwarding, shipping, airfreighting, banking or translation fields – we would be glad to have details, plus a good black and white photograph where appropriate.

Items for inclusion in our fortnightly 'Export Services' feature should be addressed to the Overseas Editor, 'Trade and Industry', Room 439, 1 Victoria Street, London SW1.

Advertisers who wish to be associated with this feature should contact Mike White at T. G. Scott's on 01-242 6264.

Dawsons adds Montreal

Dawson Brothers Shipping has started an additional service to Montreal.

Agents in Montreal are G. Bechard and though the groupage service there is – at present – only on demand Dawsons is confident that this too will soon become a regular weekly run.

All goods for Canada are consolidated at Dawsons receiving depot in Plaistow, East London or at Confill in Birmingham. Containers are shipped out from either Manchester, Tilbury or Southampton.

Further information: circle 726

Flight time to US oil capital cut

British Airways and America's Eastern Airlines are cutting the journey time between London and Houston by 2½ hours compared with any other service.

From yesterday (8 September) it is possible to fly between the two cities in just eight hours.

The new service is provided by flying between London and Washington by British Airways Concorde and between Washington and Houston by Eastern Airlines Boeing 727.

Transit time reduced

The normal 60 minutes minimum transfer time from international to domestic flights at Dulles International Airport, Washington, has been cut to 50 minutes in each direction. This includes clearance of customs, immigration and health controls at Washington, westbound.

Flights operate daily except Wednesday westbound and except Thursday eastbound. Fares are £958 return (Eastern first class) or £946 (Eastern economy) until 15 October when the fares will rise to £1,012 and £1,001 respectively.

Further information: circle 727

Have you a good export picture?

Each week *Trade and Industry* publishes pictures illustrating Britain's export business. Companies with export successes are invited to send in the story with a photograph showing the goods in manufacture, ready for despatch, or, preferably, on arrival overseas. The story must, of course, reach us while it is still news.

Send your export photographs to the Editor, *Trade and Industry*, Room 439, 1 Victoria Street, London SW1H 0ET.

ACL ships major mining order

Being loaded aboard the Atlantic Container Line ro-ro containership *Atlantic Crown* at Southampton is part of a £2.3 million export order for mining equipment won by the Dowty Group Mining Division. The total weight of the shipment was 1030 tons, and the equipment includes the first order from the United States for Dowty's new and advanced, hydraulically powered, four-leg shield roof support.

. . . and diesel engine

One of Atlantic Container Line's new 180-ton capacity roll trailers being used at the Royal Seaforth Container Terminal, Liverpool, for the first time for the shipment of a £500,000 diesel engine on its way to Massachusetts power station. The engine, 28 ft 6 in long, 7 ft 5 in wide, 13 ft 5 in high and weighing – with lifting gear – 103 tons, was built by Mirrlees Blackstone (Stockport) Ltd, Hazel Grove, a member of the Hawker Siddeley Group. New techniques were used to transfer the engine from the low loader to ACL's new roll trailer, which arrived in the 20 858 tons ro-ro container vessel *Atlantic Star*.

Further information: circle 728

Canary Island services restarted

Fred Olsen Lines has restarted the weekly service from London to Madeira, Arrecife, Las Palmas and Tenerife with the sailing of the ms *Blenheim* on 1 September.

The service will be operated by *Blenheim* and *Black Watch* and will cater for conventional, and unitised traffic including prebooked refrigerated consignments.

Fred Olsen Lines is continuing to offer a full load container service from Felixstowe to Las Palmas and Tenerife, at 14 day intervals.

Less-than-container load traffic for these ports will continue to be received at depots in Birmingham, Coatbridge, Manchester and Felixstowe for stuffing into containers to connect with *Cervantes* from Felixstowe.

Further information: circle 729

Financial services: foreign exchange advice . . .

Floating exchange rates involve risks which the exporter, importer, merchant or manufacturer cannot afford to ignore says Capital Financial Services.

Capital Financial is an independent consultancy service which will advise companies on many aspects of foreign currency transactions including exchange risk management.

The company's other services include guidance when dealing with spot and forward transactions or when entering into option contracts; advice on borrowing and lending in eurocurrency; advising on cover for transfer risk and commercial default provided by the Export Credits Guarantee Department; and exchange control regulations relating to export transactions.

Further information: circle 730

. . . and provision of export finance

Deposit and Finance is a wholly-owned subsidiary of a small private bank that specialises in the provision of export finance for small expanding companies.

The company believes that there are a number of companies who would like to start exporting for the first time but are hampered by the lack of specialised staff and are daunted by the problems of finance and actually exporting.

Deposit and Finance's services are designed to meet the needs of each company and, the company claims, will allow staff to concentrate on the design, quality and manufacture of their products.

The company's services can be used on an ad hoc basis or on a continuing basis to deal with problems as they arise.

Further information: circle 731

Overseas trade country data

Argentina

New industrial promotion law. After a year of preparation the National Executive Power has enacted the new law (21608) for industrial promotion. The law covers the establishment of new industrial activities, the encouragement of geographical decentralisation and the consolidation of domestic industry.

It is, however, difficult to envisage at this stage how the law will be interpreted, as it is still short of its regulating decree.

A full English translation is available on request from OTAR, tel. 01-248 5757 ext. 474.

Inquiries: CRE 01-215 5287.

Australia

Aircraft tyres. Following a call for tender for the supply of aircraft tyres for an Australian government department, the Australian Customs representative in London has been requested to conduct inquiries for the purpose of establishing a normal value for these particular goods in the United Kingdom.

It should be noted that where Australian government purchasing involves a substantial value and a tender includes the supply of foreign goods in competition with Australian goods, it is government policy to conduct inquiries overseas to establish whether the foreign tender involves goods offered at dumping prices.

Inquiries: CRE 01-215 5319.

Ref: CRE 36493

Further information

In many cases further information on the notices published on these pages is available to British exporters from the Department of Trade. The main branches concerned are: Commercial Relations and Exports (CRE) Division, 1 Victoria Street, London SW1H 0ET (tel: direct dialling); and Overseas Tariffs and Regulations Section (OTAR), Export Data Branch, Export Services and Promotions Division, Export House, 50 Ludgate Hill, London EC4M 7HU (tel: 01-248 5757). In each case, the relevant information source is indicated at the end of the notice by its initials (OTAR or CRE) and, in the case of OTAR, the telephone extension.

Paper and paperboard. A notice in *Trade and Industry*, 5 August 1977, reported dates of the public hearings to be held in connection with the Industries Assistance Commission reference of 6 October 1976 on paper and paperboard.

It has now been announced that, as a result of representations received, the commission's inquiry has been expanded to include types of fine papers not covered by the original reference.

The amended reference now covers the following tariff items:

1 48.01.92 being paper or paperboard having a brightness on one or both sides of not less than 40 GE Units and not being machine glazed paper;
2 48.05.4 having a brightness on one or both sides of not less than 40 GE Units and not being perforated paper;
3 48.07.62, not being pressure sensitive adhesive;
4 48.07.69, being electrostatic photocopying;
5 48.07.73.

Further details will be published when available.

Inquiries: CRE 01-215 5319.

Ref: CRE 1744/76

Tyre cord fabrics: public hearing. A notice in *Trade and Industry*, 2 September, reported the Industries Assistance Commission reference on tyre cord fabrics.

It has just been announced that the public hearing will be held in Melbourne on 13 September. Those persons wishing to give evidence at the hearing should advise the IAC immediately by telex (32940 a/b Indcom).

Evidence may be submitted either through the accredited agent of the firm or trade association concerned, or through the Australian-British Trade Association, 6th Floor, Dorland House, 18-20 Lower Regent Street, London SW1Y 4FW, tel. 01-930 2524, who will represent UK interests if authorised. The association charges a fee for its services, the amount varying according to the work entailed in the preparation of a submission and whether or not the interested party is a member.

Inquiries: CRE 01-215 5319.

Ref: CRE 1455/77

Vices. A notice in *Trade and Industry*, 26 August, reported the imposition of tariff quotas on handyman and industrial vices.

Details of the Industries Assistance Commission reference have now been released. The commission has been asked to report on whether assistance should be accorded the production in Australia of vices falling within tariff item 82.04.9 and if so the nature and extent of such assistance. Pending its long-term report, the commission has been requested to provide a report by 30 April 1978 on whether tariff quotas or other measures should apply to these goods after June 1978.

Dates and locations of public hearings, at which UK industry may give evidence, will be published when details are available.

Inquiries: CRE 01-215 5319.

Ref: CRE 1457/77

Brazil

Imports by Petrobras. President Geisel issued a decree on 29 July, which gave formal exemption to Petrobras – the state oil company – from restrictions on imports of materials and equipment, even where there are national similars. These exemptions are, however, subject to the following conditions:

1 The exemption will be valid until 29 July 1979.
2 Only equipment, machinery, materials and spare parts for use in the production of crude oil and natural gas on the Bacia dos Campos oilfield will be eligible. A detailed list of the goods affected will be published by the Minister of Mines and Energy.
3 Petrobras will be called upon to declare formally the purpose of all imports in order to qualify.
4 Wherever Brazilian industry makes a similar product and can demonstrate delivery during the period of this exemption, it will be eligible for various fiscal incentives by way of compensation. This will apply only to deliveries made to Petrobras.

Inquiries: OTAR 01-248 5757 ext. 476/474.

Duty exemptions. Customs Policy Council resolution 2997, published in the *Diario Oficial* of 13 June 1977, gave exemption from import duty to the following chemicals for use as fertilisers:

Tariff no.	Goods
31.02.03.00	Ammonium sulphate
31.02.06.00	Urea
31.03.04.00	Superphosphates, having a P_2O_5 content of 22 per cent or less
31.03.05.00	Superphosphates, having a P_2O_5 content of 22 per cent to 45 per cent
31.03.06.00	Superphosphates, having a P_2O_5 content of over 45 per cent

These concessions are dependent on the purchase of a proportion of a similar domestic product, in terms of nitrogen and/or PO (soluble phosphorus). The proportions vary according to the region inwhich they are to be used.

For purposes of customs clearance the import licence must have a declaration that the goods benefit from duty exemption.

This resolution supersedes all previous concessions on these goods.

Customs Policy Council resolution 2994, published in the *Diario Oficial* of 13 July 1977, exempted a quota of 500 tonnes of linear alpha olefin, of tariff heading 27.10.14.99, from import duty. This concession lapses on 13 July 1978.

Customs Policy Council resolution 2991, published in the *Diario Oficial* of 15 July 1977, exempted from import duty, machinery, equipment, apparatus, instruments, accessories and tools, not having a national similar necessary for the modernisation plan for the Sao Paulo suburban network and the Fepasa-Bird rail project.

These goods will also be exempt from the

360 day prior deposit.

This concession has a period of validity of five years, but may be revoked at any time should the national interest require it.

Customs Policy Council resolution 3003, exempted from import duty and prior deposits goods intended for the maintenance and expansion of the Rio de Janeiro Metro system, where such goods are imported by the Companhia do Metropolitano do Rio de Janeiro – Metrô.

Customs Policy Council resolution 3000, published in the *Diario Oficial* of 5 August 1977, exempted ethylenodiamine, under tariff heading 29.22.28.00, from import duty when intended solely for the production of agricultural protective chemicals.

Inquiries: OTAR 01-248 5757 ext. 476/474.

Reference prices. Customs Policy Council resolution 2992, published in the *Diario Oficial* of 13 July 1977, established a reference price on calcium chloride, under tariff heading 28.30.06.00, of US$135 per tonne – cif.

Customs Policy Council resolution 2993, published in the *Diario Oficial* of 13 July 1977, established a reference price on monosodium glutamate, under tariff heading 29.23.23.00, of US$1,540 per tonne.

Customs Policy Council resolution 2989, published in the *Diario Oficial* of 13 July 1977, altered the reference price on 'dies, other than round', under tariff heading ex 82.05.08.03, from its previous level of US$15 to US$40 per kg.

Customs Policy Council resolution 2998, published in the *Diario Oficial* of 27 July 1977, reduced the reference price on 'Incandescent filament lamps, for vehicle lighting, of any voltage, torpedo or pre-focus based', under tariff heading 85.20.10.00, from US$0.95 to US$0.50 each.

Inquiries: OTAR 01-248 5757 ext. 476/474.

Duty reduction on image processors. Customs Policy Council resolution 2990, published in the *Diario Oficial* of 13 July 1977, reduced the import duty on 'X-ray machines having crystal detectors for image processing', under tariff heading ex 90.20.01.99, from 9 per cent to 0 per cent.

Inquiries: OTAR 01-248 5757 ext. 476/474.

Duty increase on sprinklers. Customs Policy Council resolution 2996, published in the *Diario Oficial* of 20 July 1977, increased the import duty on sprinklers for automatic fire-fighting equipment, under tariff heading 84.21.05.00, from 45 per cent to 75 per cent. This increase is temporary and lapses on 4 August 1978.

Inquiries: OTAR 01-248 5757 ext. 476/474.

Agricultural chemicals. Customs Policy Council resolution 3001, published in the *Diario Oficial* of 10 August 1977, exempted from import duty 'propionic acid, propionic anhydride and dichloroaniline (DCA 93 per cent)' under tariff headings 29.14.19.01, 29.14.19.02 and 29.22.99.00, provided that these are used in the manufacture of agricultural protective chemicals.

Resolution 3002, published in the *Diario Oficial* of the same day, excluded two chemicals from the lists of goods benefitting from duty exemptions under resolution 2941. The headings affected are as follows:

Tariff no.	Goods
29.02.32.00	Chlorocamphene (CAMPECHLOR) in a minimum concentration of 99 per cent
29.02.33.00	Chlorocamphene (CAMPECHLOR) in a minimum concentration of 90 per cent

Inquiries: OTAR 01-248 5757 ext. 476/474.

Manufactured goods tax. Decree 79/965, published in the *Diario Oficial* of 15 July, made certain amendments to the rates of manufactured goods tax (IPI) applicable to motorcycles, classified under tariff headings 87.09.01.00, 87.09.02.01 and 87.09.03.00. The changes are as follows:

per cent

Tariff no.	Rate of manufactured goods tax			
	Until 31 Dec 77	Jan '78-31 Dec 78	Jan '79-31 Dec 79	After Jan '80
87.09.01.00	8	12	18	24
87.09.02.01	6	10	12	15
87.09.03.00	8	12	18	24

The current rates are 24, 15 and 24 per cent respectively.

Inquiries: OTAR 01-248 5757 ext. 476/474.

Suspension of taxes. Portaria interministerial 301, published in the *Diario Oficial* 27 June rescinded the suspension of payment of taxes for goods imported for projects having financial incentives and administered by Sudene.

There were only two exceptions to this: goods linked to schemes already approved by Sudene up to 2 December 1975, and the examination of which for tax exemption for imported machinery has not yet been completed; and goods linked to projects already submitted to Sudene before 2 December 1975 and not yet approved or the examination of which, for tax benefit for imported goods has not been completed.

Inquiries: OTAR 01-248 5757 ext. 476/474.

Exemption from manufactured goods tax. Decree-law 1568, published in the *Diario Oficial* of 3 August, exempted from manufactured goods tax (IPI) endoparasiticides sold in bulk or intended for use in livestock farming.

Inquiries: OTAR 01-248 5757 ext. 476/474.

Imports for the Bacia Dos Campos oilfield. Decree law 1565, published in the *Diario Oficial*, 1 August, set out special conditions for imports made by Petrobras for use in the Bacia dos Campos oilfield. Such goods shall not require examination for national similars nor shall be required to be licensed before shipment of the goods.

The goods affected by this measure will be enumerated by the Minister of Mines and Energy. This shall be valid until 31 July 1979.

Inquiries: OTAR 01-248 5757 ext. 476/474.

Manufactured goods tax on furniture. Decree 79 878, published in the *Diario Oficial*, 29 June, reduced the rate of manufactured goods tax (IPI) on furniture, classified in chapter 94 of the tariff, from 8 to 4 per cent.

Inquiries: OTAR 01-248 5757 ext. 476/474.

Licensing for steel imports. Cacex comunicado 606, 3 August, made certain alterations to the provisions to Concex resolution 108, which made the issue of import licences for metal products subject to the prior approval of the Steel and Non-ferrous Metals Council – Consider. The main provisions are as follows:

1 Goods under tariff heading 73.35 – Springs and leafs for springs of iron or steel – are now subject to the prior approval of Consider before issue of the import licence.
2 The above does not apply to imports in any quantity or any value when these are imported by, and are for the use of: Petrobras – the state oil company, Embraer – the state aircraft company, commercial air transport companies, including air taxi companies, aerophotogrammetry and agricultural aviation companies and other aircraft and motor building or repairing companies approved by the Ministerio da Aeronautica; or imports up to a limit of US $100 on request either in single consignments or with other goods when imported by any importer.
3 Extensions of any licences previously issued shall be subject to the approval of Consider insofar as heading 73.35 is concerned.

Inquiries: OTAR 01-248 5757 ext. 476/474.

Import licence suspensions. Cacex comunicados 601 and 609, of 22 June and 9 August respectively, excluded a number of goods from the lists of goods subject to suspension of import licences under the provisions of Cacex Comunicado 574, of 20 December 1976. The headings affected are as follows:

03.01, 03.02, 03.03, 04.06, 05.07, 05.15, 07.02, 07.03, 07.04, 07.06, 08.01-08.13, 09.06, 09.07, 12.01, 14.01-14.05, 15.06, 15.14, 15.15, 17.02, 22.09, 71.02, 71.03, 90.02, 90.08

Inquiries: OTAR 01-248 5757 ext. 476/474.

Canada

Hazardous products act. On 11 August the Canadian Minister for Consumer and Corporate Affairs announced amendments to the hazardous products act regulations requiring that certain household cleaning agents should be packed in child-resistant containers. New regulations on items containing pine oils were also announced.

The regulations require that all household products which contain toxic amounts of petroleum distillates, turpentine, methyl alcohol, and pine oils be packaged in child-resistant containers. Those that include pine oils, must also be labelled with the appropriate hazardous product symbol and carry a warning.

Further information is available from OTAR, 01-248 5757 ext. 455/456/457.

Denmark

Television receivers. The following levies come into force on 1 July replacing the existing 20 per cent turnover tax:

Colour television receivers with a screen over 22 in – 700 Kr each.
Colour television receivers with a screen of 22 in and under – 600 Kr each.
Other television receivers – 140 Kr each.

Inquiries: OTAR 01-248 5757 ext. 7174.

Fiji

Airport tax. From 1 September an airport service charge of F$ 2.50 will be levied on embarking passengers for destinations outside Fiji. Passengers exempted include: heads of state, diplomats accredited to Fiji, transit passengers and children under two years of age.

Inquiries: CRE 01-215 5321.

France

Labelling of wine and grape must. The French Ministry of Agriculture published in the *Official Journal* of 12 August a circular explaining the regulations concerning the labelling of wine and grape must.

Copies of the French text can be obtained from OTAR 01-248 5757 ext. 423.

Sugar products. A decree of the French Ministry of Agriculture laying down compositional standards and labelling requirements for certain sugar products destined for human consumption was published in the *Official Journal*, 2 August.

Most of the provisions of the decree will come into force six months after the date of publication.

Also published in the same *Journal* is an order of the Ministry of Agriculture laying down the nett weights allowed for these sugar products when pre-packed for retail sale.

The provisions of this order will also come into force six months after the date of publication. This decree and order implement EEC directive 73/437/EEC of 11 December 1973.

Copies of the French text of both documents can be obtained from OTAR 01-248 5757 ext. 423.

Indonesia

Pesticides. The Indonesian Minister of Finance has announced with effect from 11 July partial exemption from duty on the import of pesticides for agricultural estates (CCCN number 38.11.55), so that the import duty is now 6 per cent and the sales tax 10 per cent.

Inquiries: OTAR 01-248 5757 ext. 469/401/468.

Jordan

Import duty amendments. The Jordanian authorities have announced in *Official Gazette* 2710, 7 July, the following amendments. The new rates of duty came into effect on 7 July.

CCCN/Description	Unit	Rate of duty
69.08 Glazed sets, flags and paving, hearth and wall tiles	*Ad val.*	35%
69.10 a Sinks, wash basins, bidets, water closets, pans, urinals, baths and like sanitary fittings	*Ad val.*	35%
69.10 b Baths, if imported under separate bill of lading	*Ad val.*	18%
36.06 a Matches in boxes whose contents exceed 40 sticks but not 60 sticks	144 boxes (one gross)	350 fils
36.06 b Others	1 000 sticks	50 fils

Inquiries: OTAR 01-248 5757 ext. 475/7062.

Norway

Textile imports. Further to the notices in *Trade and Industry*, 26 November 1976, 29 October 1976 and 19 September 1975, the Norwegian authorities have announced that from 18 July 1977 the following products, when imported from the EEC and Efta countries (excluding Portugal), no longer require an import licence, provided that a movement certificate is supplied.

CCCN/Description
ex 60.03 Stockings and socks (except ladies stockings) of other materials than wool
ex 60.04 Shirts, knitted, of cotton or other textile fibres
ex 60.04 Underwear of cotton for men or boys
ex 60.04 Underwear of cotton and other textile fibres for ladies, girls and children
ex 60.05 Pullovers, sweaters, jumpers, cardigans and jackets of all kinds of textile fibres
ex 61.01, ex 61.02 Slacks, jeans and trousers (except shorts) of cotton
ex 61.01 Slacks, jeans and trousers of discontinuous man-made fibres
ex 61.01, ex 61.02 Sports jackets, windproof jackets, etc: 1 of cotton; 2 of which the chief constituent material contains silk or continuous man-made textile fibres; 3 of discontinuous man-made textile fibres [1]
[1] This only applies to garments for men and boys.
ex 61.01 Mens' suits of cotton or discontinuous man-made fibres
ex 61.01 Suit-jackets of discontinuous man-made fibres
ex 61.02 Blouses of cotton or other textile fibres
ex 61.02 Ladies suits and dresses of cotton
ex 61.02 Skirts of cotton, discontinuous man-made fibres or other textile fibres
ex 61.03 Shirts, woven of cotton or other textile fibres
ex 62.02 Bedwear of cotton or other textile fibres

Inquiries: OTAR 01-248 5757 ext. 458/461.

Portugal

Colourings in fungicides. Portuguese *Diario da Republica* 174, 29 July 1977 published decree law 302/77 on the use of colourings in fungicides.

From 1 August 1978 the use of colourings in phytopharmaceutical fungicides will be prohibited. Exceptions will be made only in specific cases, to be determined by the Commission on the Toxic Effects of Pesticides, where the colouring serves to indicate that the product is unfit for animal or human consumption.

It will also be forbidden to sell any fungicide containing colourings, or colourings and coloured raw materials for use in the manufacture of fungicides.

Inquiries: OTAR 01-248 5757 ext. 458/461.

Tariff amendments. Portuguese *Diarios da Republica* 187 and 188, 13 August and 16 August published decree laws 336 and 337/77, amending the Portuguese tariff.

The note to heading CCCN 17.03.01 is deleted. In addition, certain mfn rates of duty have been amended as follows:

CCCN	Mfn rate
29.44.05	Free
30.03.04	6%
38.19.09	2.4%
84.06.03	Free
84.12	Free
84.17.05	1.2%
85.15.03	1.2%
85.21.03	Free
87.03.03	Free
88.03	Free
90.14	Free
90.17.02	Free
90.28.04	Free
97.04.04	8.00 escudos per kg

For those goods still subject to duty, any reductions previously made on duties levied on goods imported from EEC countries will continue to apply.

Inquiries: OTAR 01-248 5757 ext. 458/461.

Compensation. On 9 August the Portuguese government approved a law setting out the conditions for obtaining compensation by shareholders of companies which have been nationalised and those whose land has been expropriated under the Agrarian Reform Laws.

A brief summary of the law is available from CRE and a full translation will be available shortly.

Inquiries: CRE 01-215 5341.

Singapore

Certain sugar products. The Singapore government has issued the Customs Duties (Amendment no. 7) Order 1977 which came into effect on 12 August 1977 whereby the tariff duties are amended by deleting subheading 900 of CCCN 17.02 and substituting the following:

CCCN/Description	Unit	Customs duty Full	Pref.	Excise
17.02 900 Sugars and syrups not elsewhere specified or included: 1 High fructose syrup, liquid glucose and similar products acceptable to the Comptroller	t	$308.56	$308.56	$135.00
2 Other	t	$308.56	$308.56	$163.54

Rate of exchange: S$2.5 = US$1.

Inquiries: OTAR 01-248 5757 ext. 401/468/469.

Spain

Gambling equipment. The Spanish *State Gazette*, 17 August, published an order of 6 August of the Ministry of Industry and Energy, establishing additional rules for the manufacture and distribution of gambling machinery and equipment.

Most of the rules refer to local manufacture, except article 10, according to which imported machinery will have to be accompanied by a circulation permit issued by the Spanish Home Office, so that the equipment and/or machinery may travel from the customs point of entry in Spain to the site where it will be finally installed.

A copy of the Spanish text is available from OTAR 01-248 5757 ext. 461/458/459/460.

Gambling casinos. The Spanish *State Gazette*, 15 June, published an order of 1 June of the Ministry of the Interior approving the provisional regulations on gaming casinos.

An English translation of this order is available from OTAR 01-248 5757 ext. 461/458/459/460.

Tariff modifications. The Spanish *State Gazette*, 8 July, published royal decrees 1635 to 1640/1977 of the Ministry of Commerce, modifying the Spanish customs tariff to read as follows:

CCCN/Description	Per cent import duty
29.44 E	
Tetracycline (including terramycin and aureomycin) and its derivatives, salts and esters:	
1 Diemethylchlortetracycline	10.5
2 Other	10.5
(the duty not to be less than 3 pesetas per gram of antibiotic contained therein)	
29.14 B	
Unsaturated acyclic monoacids:	
1 Acrylic and methacrylic acids, their salts and esters:	
a Methyl methacrylate	20
b Other	10
28.28 B	
Vanadium pentoxide	10
28.28 J	
Molybdenum oxides	1
28.28 K	
Other	10.5
39.01	
Condensation, polycondensation and polyaddition products, whether or not modified or polymerised, and whether or not linear (for example, phenoplasts aminoplasts, alkyds, polyalkyd esters and other unsaturated polyesters, silicones, etc):	
C Polyesters:	
1 Alkyds	28
2 Ethylene-glycol polyterephthalate:	
a In sheets of a thickness not exceeding 0.20 mm, coated with gelatine on both sides	1
b Other	18
3 Polycarbonates	9
4 Other	20
J Epoxide resins, including epoxyamines	18
K Other	9
84.19 C	
Machinery for putting products in liquid or paste form into containers, whether or not with provision for measuring, aerating, sterilisation, closing, capping, etc:	
1 Machines for filling and closing containers (other than bags or envelopes) produced on the machine itself	10
2 Machines for filling and closing containers of waterproofed or greaseproof paperboard or composites, in a sterile atmosphere	10
3 Other	24.5
84.19 D	
Machines for packing bulk solid products, whether or not with provision for measuring, closing, embossing, printing, etc:	
1 Machines for filling and closing containers produced on the machine itself:	
a For flat bags or envelopes, with an output of more than 300 units per minute, or for other packs, with an output of more than 100 units per minute	10
b Other	24.5
2 Automatic filling and closing machines for gelatine capsules	10
3 Other	24.5
84.19 E	
Machines for packing products in the form of separate items or already in other packaging:	
1 Wrapping machines:	
a Producing portions or units by cutting or moulding the product to be packed	10
b For individual items or items grouped together by means of card or paperboard shapes	10
c Other	24.5
2 Machines for filling and closing 'blister' packs produced on the machine by thermoforming of plastic film:	
a Automatic	10
b Other	24.5
3 Machines for packing in individual cases or boxes	10
4 Machines for putting up bottles, flasks, boxes, packets, etc, in packs for transportation or delivery purposes:	
a With a capacity of more than 70 outer packs per minute	10
b Other	24.5
5 Other	24.5
84.19 F	
Other packing and wrapping machines, including multi-function machines produced by a combination of the machines in the preceding subheadings:	
1 Labelling machines with an output of more than 700 packs per minute	10
2 Other	24.5
84.19 G	
Parts	24.5
87.03 B	
Fire escapes (the length of the ladder not to be less than 25 m)	25

The above modifications are valid from 8 July.

Inquiries: OTAR 01-248 5757 ext. 461/458/459/460.

Seafood products. The Spanish *State Gazette*, 2 July, published royal decree 1521/1977 of the Prime Minister's office laying down rules for the handling, preparation, transport and marketing of seafood products for human consumption.

An English translation of this decree is available from OTAR 01-248 5757 ext. 461/458/459/460.

Capital goods. The Spanish *State Gazette*, 14 July, announced the following additions, extensions, deletions and amended descriptions to the capital goods list of the Spanish import tariff, imported at a concessional rate of 5 per cent import duty subject to the importer making application to the Spanish Ministry of Commerce.

CCCN/Description	Terminal date
ADDITIONS	
84.45 C8b	
Machines for cutting gear teeth by generation and hobbing, with automatic feed, weighing more than 6 500 kg	14.7.79
86.04	
Motor vehicles specially designed for the building and maintenance of railways and tramways	14.7.79
EXTENSIONS	
90.20 A2	
X-ray equipment of an output exceeding 50 kV, specially designed for radiological examinations in industrial inspection, control and product-grading processes	21.8.79
90.28 C6	
Unitary or modular apparatus for chemical or clinical analyses, with fully-automated operation from the insertion of the sample to the obtaining of the numerical and/or graphic result	8.8.79
90.28 C6	
Apparatus for physical or chemical analyses, with built-in digital display computing devices	12.6.79
AMENDED DESCRIPTION	
84.33 B	
Machines for partitioning cardboard boxes	
DELETION	
87.01 C	
Tractor units specially designed for loading and unloading cargoes on semi-trailers carried on ferries, fitted with an elevating fifth wheel of an elevating capacity exceeding 18 tonnes, a single unsprung rear axle and a torque converter	

Inquiries: OTAR 01-248 5757 ext. 461/458/459/460.

EEC import quotas. The Spanish *State Gazettes* of 6 to 10, 12 and 17 August, published a number of resolutions of the Ministry of Commerce and Tourism, inviting applications from Spanish importers, merchants and industrialists against the following EEC quotas for the second half of 1977.

Quota no./CCCN/Goods	Value (pesetas)
51/91.09 A, ex 91.10	
Watch cases	168 000
65/84.41 A1, ex 84.41 C	
Sewing machines (domestic use), their parts and spares	3 760 000
66/85.15 A1, 85.15 A2	
Television and radio receivers	173 335 000
67/85.15 B1, 85.15 B2, 85.15 B3	
Radio transmitters and transmitter receivers	190 217 000
69/87.02 B2	
Special vehicles for the transport of sands, rocks and minerals	247 233 000
70/87.01 A, 87.01 B2, ex 87.06	
Tractors and their parts	599 915 000
71/ex 87.02 A1	
Motor vehicles for the transport of persons and of persons and goods	874 467 000
73/87.01 C, ex 87.02 A2, 87.02 B1, 87.02 B3, 87.03, ex 87.06	
Commercial motor vehicles and their parts and spares	753 983 000
74/Ex 87.04, 87.05	
Chassis and bodies for motor vehicles	18 174 000
75/87.14	
Other vehicles, not self-propelled and parts and spares	25 289 000
Applications for the above quotas must be presented within one month from 10 August.	
7/25.02, 25.03	
Pyrites and sulphur	151 182 500
45/69.11 B, 69.12 B, 69.13, 69.14	
Manufactures of ceramics	29 950 500
46/ex 70.13 B1, 70.21 A, 70.21 B, 70.21 C	
Other glass manufactures	23 138 500
48/71.05, 71.06, ex 71.09, 71.10, 71.11	
Precious metals, precious metal-products, either raw or semi-finished	104 113 500
50/71.12 A, 71.12 B, 71.13, 71.14 A, 71.14 B, 71.15, 71.16	
Imitation jewellery and other jewellery	24 605 900
52/ex 73.23	
Iron and steel containers	8 652 000
54/ex 73.40 C1, 73.40 C2, 73.40 C3	
Other manufactures of cast iron or steel	80 653 000
55/74.19 E, 74.19 F	
Other copper manufactures	6 972 000
56/ex 76.15, 76.16 B	
Other aluminium manufactures	42 164 000
59/82.03 A, 82.03 B, 82.03 C, ex 82.03 E, 82.04	
Hand tools for industry	67 346 500
60/ex 82.02, ex 82.06 A, ex 82.06 B	
Saws and blades	29 862 000
61/82.09, 82.10, 82.11 A, 82.11 C, 82.11 D, 82.11 E, 82.11 E, 82.14	
Cutlery, knives, etc, made of iron and steel	35 862 000
Applications for the above quotas must be presented within one month from 12 August.	
77/92.11 C, 92.11 D, 92.11 E	
Phonographs, dictaphones and other apparatus for sound recording and reproduction	112 591 000
79/92.01, 93.02, 93.03, 93.04, 93.05, 93.06	
Arms	44 749 000

Quota no./CCCN/Goods	Value (pesetas)
80/93.07	
Ammunition	23 623 000
82/97.01, 97.02, 97.03	
Toys	51 550 000
84/98.01 A2b, 98.01 A2d, 98.01 B, 98.12	
Miscellaneous manufactures	2 271 000
83/97.04, 97.05, 97.08	
Equipment and articles for parlour games	7 999 000

Applications for the above quotas must be presented within one month from 11 August.

Inquiries: OTAR 01-248 5757 ext. 461/458/459/460.

South Africa

Customs tariff changes. The following amendments have been published in recent issues of the South African *Government Gazette*.

8 July

R.1244 CCCN 73.18.70. The rates of duty on certain seamless tubes and pipes, of iron or steel, are amended.

Industrial Rebates – deletions

R.1245 Item 307.07: 27.13, 28.40. 29.06 and 35.03, 307.08: 27.06, 27.15, 29.21, 40.01 and 83.09, 307.09: 29.16, 307.10: 28.19, 28.28, 28.38 and 29.31, 309.01: 44.15 and 48.07, 310.01: 38.08, 48.15 and 63.02, 310.02: 70.20, 310.04: deleted, 310.05: 29.14 and 83.13, 310.06: 48.15, 310.08: 15.08, 27.07, 28.01, 28.10, 29.14, 29.16 and 32.02, 35.01, 35.03, 41.02, 57.10 and 58.04, 73.12 and 74.05, 313.01: 39.07 and 48.07, 313.06: 39.06, 313.07: 29.15, 314.01: 32.09 and 95.00, 314.02: deleted, 315.01: 25.27 and 28.03, 315.03: 27.07 and 73.13, 315.05: 73.10, 73.12 and 73.14, 315.06: 28.19, 32.08 and 83.14, 315.07: 29.14 and 73.18, 315.09: 28.28, 315.10: 82.14, 315.12: 41.07, 315.13: 39.07, 44.27, 70.19 and 73.12, 315.15: 59.04, 316.01: 76.03, 316.03: 73.11, 316.04: 25.26 and 59.12, 316.05: 28.27 and 29.14, 316.07: 84.63, 316.11: 15.07, 15.08, 25.27, 27.06, 27.13, 38.18. 40.01, 44.28, 48.21, 58.05 and 59.12, 316.13: 42.04, 316.14: 68.15, 317.01: deleted, 317.06: 70.20 and 94.01, 318.02: 73.32, 78.03 and 85.21, 318.03: deleted, 319.01: 44.11 and 48.01, 320.01: 69.08 and 73.29, 320.02: 98.01, 320.04: 44.10 and 70.20, 320.10 and 320.11 deleted, 321.01: 53.12, 53.13 and 73.13

The above rebate provisions are withdrawn as they have fallen into disuse.

29 July

R.1431 CCCN 03.02, 05.06, 05.09, 05.10, 05.11, 05.12, 05.15, 06.01, 06.02, 07.01, 07.06, 09.04, 09.06, 09.07, 09.10, 11.01, 11.02, 11.07, 12.03, 13.02, 14.01, 15.02, 15.11, 16.03, 17.02, 18.01, 18.02, 19.05, 19.07, 19.08, 20.02, 20.04, 21.07, 25.03, 25.07, 25.15, 25.23, 28.11, 28.17, 28.18, 28.30, 28.32, 28.34, 28.37, 28.39, 28.41, 28.42, 28.43, 28.44, 29.14, 30.02, 38.07, 38.14, 40.01, 40.04, 43.03, 44.15, 44.23, 44.27, 46.03, 48.01, 48.05, 48.07, 48.13, 48.21, 58.04, 59.01, 64.02, 67.02, 68.02, 68.16, 69.03, 69.05, 69.11, 69.12, 70.13, 71.09, 73.22, 73.23, 73.33, 73.34, 73.36, 74.09, 74.11, 76.01, 76.16, 78.01, 78.04, 80.04, 82.04, 82.07, 84.01. 84.02, 84.06, 84.08, 84.14, 84.18, 84.22, 84.24, 84.25, 84.28, 84.46 84.47, 84 50, 84.55, 84.59, 84.62, 84.63, 85.01, 86.10, 87.04, 88.01, 88.02, 88.03, 90.17, 90.18, 90.24, 91.01, 91.02, 91.04, 91.09, 91.10, 92.08, 92.10, 92.13, 97.07 and 98.10. The effect of this notice is that further subdivisions of various tariff headings are brought about. The rates of duty are not amended.

Industrial rebates

R.1433 Item 317.04: CCCN 87.04 – extent of rebate – full duty less 5 per cent applicable to 87.04, 25.15 and 87.04, 25.20, 87.04, 25.40 – full duty less 3 per cent 87.04, 25.50 – full duty less 3 per cent 87.04, 25.55 full duty and 87.04, 25.60 – full duty. These amendments are consequential to amendments to schedule 1 to the Customs and Excise Act 1964.

5 August

R.1491 CCCN 29.15.75. Dioctyl adipate. Specific provision is made for dioctyl adipate and the rate of duty thereon is increased from 10 per cent to 15 per cent or 90c per kg less 85 per cents of the fob price.

R.1492 CCCN 23.07. Specific provision, at a rate of duty of 20 per cent is made for milk substitutes, whether or not containing added antibiotics, having a basis of milk, buttermilk or whey powder.

R.1490 Item 306.01. CCCN 29.04. Provision is made for a rebate of the full duty on heptyl, octyl, monyl and decyl alcohols for the manufacture of the higher alcohol adipates.

19 August

R.1603 CCCN 39.02.50.55. The rate of duty on certain textile fabrics embedded in or coated or covered on both sides with vinyl chloride preparations, is amended from 25 per cent or 180c per kg less 75 per cent to 25 per cent or 200c per kg less 75 per cent of the fob price.

R.1604 CCCN 51.04.45 and 56.07.45 deleted. 60.05 and 61.06. 1 The specific provisions for woven fabrics of man-made fibres printed with scarf designs (excluding indigo blue discharge print fabrics) are deleted. These fabrics are now classifiable under other subheadings at higher rates of duty. 2 The rate of duty on knitted, crocheted or woven scarves, mufflers and stoles is amended from 25 per cent or 45c each less 75 per cent of the fob price to 25 per cent or 55c each less 75 per cent of the fob price.

R.1606 CCCN 73.18. The rate or duty on welded tubes and pipes with an external cross-sectional dimension not exceeding 170 mm, of iron or steel is amended.

R.1607 Item 306.01. CCCN 29.15. Provision is made for a rebate of the full duty on adipic acid, for the manufacture of the higher alcohol adipates.

R.1608 Item 311.19. CCCN 56.07 – extent of rebate – full duty. Provision, with retrospective effect to 6 May is made for woven unprinted fabrics of synthetic fibres (discontinuous or waste), of a value for duty purposes per m^2 exceeding 62c and of a mass per m^2 of 142 g or more but less than 250 g, which are entered before 16 September for the manufacture of boys' shorts, of the kinds, in such quantities and at such times as the Secretary for Industries may allow by specific permit.

Inquiries: OTAR 01-248 5757 ext. 471/472/473/462.

Customs tariff application. Customs tariff application list 21/77, published in the South African *Government Gazette* of 26 August 1977 contains an application to the Board of Trade and Industries for increase in duty on centrifugal pumps fitted with submersible motors, classifiable under tariff subheading 84.10.50.90, from free of duty to 20 per cent *ad valorem*.

Those British trade organisations thought to be interested in the application are being informed. Any British firm affected which wishes to make representations to the South African Board of Trade and Industries and belongs to a trade organisation should, therefore, first contact its own trade association.

If any firm proposes to make independent representations to the South African authorities and requires further information concerning the application, it should address inquiries to CRE 01-215 5274.

Tanzania

Import regulations. The government of Tanzania has decided that the following products will be put on open general licence:

1 Spare parts for motor vehicles and agricultural equipment;

2 Drugs and medicine for human or animal consumption.

Import licences will no longer be necessary for these products.

Inquiries: OTAR 01-248 5757 ext. 472/471/473/462.

Thailand

Import fee on plasticisers. The Thai Board of Investment have issued notice 22/2520 whereby a special fee of 10 per cent of the cif price is placed on the import of plasticisers of the following types:

DI heptyl phthalate; DI octyl phthalate; DI (2-ethyl hexyl) phthalate; DI iso-octyl phthalate; DI nonyl phthalate; DI iso-nonyl phthalate; DI decyl phthalate; DI iso-decyl phthalate; DI undecyl phthalate.

Coming under tariff number CCCN 29.15b and (10) admixtures of plasticisers under items 1 to 9 above, the mixture of two or more types, coming under tariff number CCCN 38.19b.

The Board of Investment shall determine which imports fall into this category and inform the Customs Department accordingly.

This notice came into effect on 14 July and remains in force until 14 July 1978.

Inquiries: OTAR 01-248 5757 ext. 401/468/469.

United States

Aerosol cosmetics. The *Federal Register*, 16 August, published a final rule by the Food and Drug Administration banning the use of any aerosol cosmetic product containing zirconium. The effective date of the order is 15 September.

A copy of the text is available from OTAR 01-248 5757 ext. 456/457/7312.

Imports of speciality steels under quota. The following table, derived from statistics provided by the US Customs Service, shows the products which are subject to the US quotas from the EEC for the 12 months 14 June 1977 to 13 June 1978 and US imports of the products concerned from the EEC during this period, as at 26 August 1977.

Pounds weight

Product	US import quotas for 12 months 14 Jun 1977 to 13 Jun 1978	US imports during this period as at 19 Aug 1977
Steel and strips of stainless steel (item 923.20)	32 600 000	8 998 654
Plates of stainless steel (item 923.21)	6 000 000	1 118 415
Bars of stainless steel (item 923.22)	5 200 000	1 236 459
Wire rods of stainless steel (item 923.23)	15 200 000	Quota filled
Alloy tool steel (item 923.26)	7 000 000	Quota filled

Inquiries: CRE 01-215 5629.

Venezuela

Temporary duty exemptions. *Trade and Industry*, 13 May, page 289, announced the temporary removal of import restrictions and duty on a number of essential foodstuffs until 23 July 1977. This period has now been extended until 23 October 1977.

Inquiries: OTAR 01-248 5757 ext. 474/476.

Statistics

The economy: selected indicators

Series are seasonally adjusted except where shown otherwise

	Gross domestic product (average estimate)	Consumers' expenditure	Fixed capital expenditure		Changes in stocks			Balance of payments		
			Manufacturing industry	Distributive and service industries excl. shipping	Manufacturing industry	Wholesalers	Retailers	Current balance	Visible balance	Invisible balance
	at 1970 prices		at 1970 prices		at 1970 prices			at current prices		
Base of index Series in Stock level at end-1976	1970	£ million	£ million		10,528	£ million 1,830	1,929	£ million		
1970	100.0	31,644	2,130	1,799	325	68	−16	733	−25	758
1971	101.7	32,505	1,991	1,930	−148	52	18	1,087	280	807
1972	104.3	34,402	1,739	2,071	−145	48	15	131	−702	833
1973	110.2	36,003	1,753	2,414	597	102	379	−752	−2,334	1,582
1974	109.9	35,590	2,028	2,414	634	81	−109	−3,380	−5,221	1,841
1975	107.7	35,234	1,745	2,034	−429	−111	−65	−1,650	−3,195	1,545
1976	108.9	35,290	1,659	1,974	5	23	9	−1,458	−3,574	2,116
1975 1st qtr.	109.5	8,988	472	516	−31	−23	−44	−541	−947	406
2nd qtr.	107.4	8,833	446	513	−74	−51	−61	−309	−655	346
3rd qtr.	106.6	8,724	420	512	−209	−26	16	−579	−967	388
4th qtr.	107.4	8,689	407	494	−115	12	24	−221	−626	405
1976 1st qtr.	109.1	8,811	405	471	0	26	33	−117	−534	417
2nd qtr.	108.2	8,730	407	489	−66	−20	−45	−397	−915	518
3rd qtr.	108.3	8,824	421	506	−2	14	16	−538	−1,143	605
4th qtr.	110.0	8,925	426	508	73	3	5	−406	−982	576
1977 1st qtr.	109.1	8,720	419	507	125	51	72	−327	−968	641
2nd qtr.		8,620pe	432 p	512 p	128 p	29 p	−5 p	−50	−710	660 e
% change last 2 qtrs. on prev. 2 qtrs.	+1.2	−2.3	+0.5	+0.5						
on a year earlier	+1.2	−1.1	+4.8	+6.1						

	Industrial production		Personal expenditure		Prices and earnings					Labour (UK)			Visible trade (Volume)	
	Total all industries	Total manufacturing industries	Retail sales	Cars: new registrations	Retail prices	% increase on a year earlier	Wholesale prices: all manufacturing industry: basic materials and fuel used	Wholesale prices: all manufacturing industry: manufactured products: home sales	Average gross earnings of all employees (GB, all industries and services covered)	Unemployed excluding school leavers and adult students: mid-month count	Unemployed excluding school leavers and adult students: % of total employees	Unfilled vacancies for adults: mid-month count	Export	Import
	at 1970 prices		at 1971 prices	monthly averages	(not seasonally adjusted)				(old series)	thousands		thousands	On a balance of payments basis at 1970 prices	
Base of index £m in base year Series in	1970	1970	1971 15,895	thousands	Jan. 1974		1970	1970	Jan. 1970	thousands		thousands	1970 7,907	1970 7,932
1971	100.3	99.5	100.0	108.5	153.4†	9.4	104.6	109.0	119.4	775.8	3.4	130.9	106.7	104.2
1972	102.5	102.1	105.8	138.6	164.3†	7.1	109.2	114.8	134.8	854.9	3.7	147.3	107.1	116.7
1973	110.0	110.7	110.7	137.1	179.4†	9.2	144.5	123.2	152.6	611.0	2.6	307.0	122.2	133.8
1974	107.0	109.1	109.9	102.8	108.5	16.0	215.3	152.0	179.6	599.7ø	2.6ø	302.7ø	131.2	136.2
1975	101.8	102.5	107.9	97.2	134.8	24.2	235.4	188.7	227.6	929.0	3.9	150.0ø	125.6	126.4
1976	102.3	103.5	108.1	104.7	157.1	16.5	299.0	219.6	263.3	1,269.8ø	5.4ø	120.4ø	135.9	134.2
1976 1st qtr.	102.0	102.2	107.3	103	149.4	22.5	266.5	206.9	250.9	1,220.3	5.2	116.7	131.5	126.1
2nd qtr.	102.5	103.7	107.6	106	154.9	16.0	292.6	214.4	258.6	1,252.1	5.3	119.4	137.1	134.6
3rd qtr.	101.6	103.7	108.9	97	158.5	13.7	306.8	223.2	265.5	1,305.5	5.5	123.6	134.2	137.9
4th qtr.	103.0	104.5	108.5	113	165.8	15.0	329.9	233.9	272.8	1,316.8ø	5.6ø	..	140.8	138.1
1977 1st qtr.	103.5	105.4	105.0	104	174.1	16.5	341.5	248.0	280.2	1,330.2	5.6	..	140.7	142.4
2nd qtr.	102.8 p	103.8 p	103.9	102	181.9	17.4	347.8	259.2	285.3	1,330.4	5.6	159.2	148.8	144.0
1976 July	101.5	103.8	108.8	91	156.3	12.9	302.0	219.8	263.1	1,288.9	5.5	118.6	130.4	139.4
Aug.	100.7	102.7	108.9	115	158.5	13.8	304.0	223.4	267.2	1,308.8	5.6	126.2	134.9	133.7
Sept.	102.5	104.5	108.9	86	160.6	14.3	314.4	226.3	266.1	1,318.7	5.6	125.9	137.3	140.4
Oct.	102.7	104.8	108.1	109	163.5	14.7	327.7	230.0	269.0	1,307.9	5.5	124.5	140.8	140.6
Nov.	103.3	104.9	109.2	119	165.8	15.0	331.8	234.6	272.2	..	..	..	138.1	140.1
Dec.	103.1	103.7	108.3	111	168.0	15.1	330.2	237.2	277.1	1,325.7 e	5.6 e	..	143.3	133.6
1977 Jan.	103.6	105.2	106.7	93	172.4	16.6	337.8	244.9	278.1	1,338.2	5.7	..	141.0	153.9
Feb.	103.6	105.7	105.7	118	174.1	16.2	339.5	248.2	278.7	1,331.4	5.6	150.5	138.3	133.8
Mar.	103.2	105.4	103.1	102	175.8	16.7	347.2	250.8	283.8	1,321.1	5.6	157.3	142.9	139.4
Apr.	103.0	104.2	1 3.4	108	180.3	17.5	349.7	255.4	283.1	1,322.6	5.6	158.5	148.8	138.6
May	104.6	106.3	104.4	108	181.7	17.1	348.3	259.8	286.2	1,315.9	5.6	161.2	145.0	142.2
June	100.7 p	100.9 p	103.8	90	183.6	17.7	345.3 p	262.4 p	286.7 p	1,352.9	5.7	157.8	152.5	151.3
July			107.0	109	183.8	17.6	345.8 p	265.8 p		1,402.2	5.9	152.7	152.1 p	149.0 p
Aug.										1,413.9 p	6.0	154.1 p		
% change latest 3 months on prev. 3 months	−0.7	−1.6	+1.0	−6.4	+3.6		+0.3	+4.5	+1.8	+5.3			+ 4½	+7½
on a year earlier	+0.3	—	−2.4	+5.1	+17.5		+16.3	+20.9	+10.3	+8.0			+11	+7½

p Provisional pe Preliminary estimate † Base of index Jan. 1962 = 100 .. Not available ø Average of available months e Estimate **Inquiries: 01-215 3453**

Nationality of vessels in United Kingdom seaborne trade: 1976

In terms of weight 99.3 per cent of goods imported into the UK is carried by sea. The corresponding figure for exports is 97.9 per cent. The nationality of the vessels (ie flag) which are involved in the carrying of this trade varies from those traditional maritime nations including the UK, Norway and Netherlands, flags of convenience such as Liberia and Panama, to many of the developing countries.

Not all ships are engaged in the same type of trade, and the types of cargo carried by the world's shipping industry can roughly be divided into tanker cargoes such as petroleum, bulk cargoes such as iron ore and timber, and general cargo referred to in this article as 'other dry'.

Seaborne trade to and from the United Kingdom, measured in terms of tonne-miles, decreased by 11 per cent in 1976. In terms of weight, however, there was an increase of 4 per cent. This is explained by the heavier dependence upon the short sea routes and the increasing amount of trade between the United Kingdom and Europe.

Tanker cargoes

Imports. Tanker imports in 1976 accounted for 74 per cent of UK imports by sea in terms of tonne-miles, but only 21 per cent by value. There was a further decline in the weight of tanker cargoes imported by sea of 3 per cent. The weight of tanker cargoes to be imported to the UK will continue to decline as crude petroleum from the North Sea becomes available.

The UK flag share of tanker cargoes increased to 31 per cent by weight in 1976. The other principal carriers of tanker cargoes are Liberia and Norway with 22 per cent and 7 per cent, respectively.

Exports. The UK flag share of the relatively minor tanker export cargoes decreased in weight terms from 48 per cent in 1975 to 43 per cent in 1976, although in 1976 this was actually more cargo.

Bulk cargoes

Imports. There was an increase in the weight of bulk cargoes imported into the UK in 1976 and although the figure falls below the 1974 level it is the second highest recorded. The UK flag share by weight did in fact fall from 33 per cent in 1975 to 30 per cent in 1976 which is identical with 1974 and the lowest recorded. Liberia, the Federal Republic of Germany and Norway are the other principal carriers of bulk cargoes, with 16 per cent, 8 per cent and 14 per cent respectively by weight.

There was a 17 per cent increase in the weight of iron ore imported in 1976 after a 21 per cent decrease during the previous year. The UK flag share was 33 per cent in 1976 compared to 34 per cent the previous year.

Seaborne imports of coal showed a decrease of 43 per cent during 1976 compared with the 38 per cent increase the previous year. The UK flag share declined dramatically from 55 per cent in 1975 to 31 per cent in 1976. Coal and iron ore between them account for approximately 40 per cent of all bulk cargo imports; the others being principally unmilled cereals, wood, lumber and cork, pulp and waste paper, and crude fertilisers. The UK flag share of all these commodities remained fairly constant.

The average length of haul of bulk cargoes decreased from 3265 nautical miles in 1975 to 3015 in 1976. For UK flag vessels the comparable figures were 3603 in 1975 and 2804 in 1976.

Exports. The export of dry bulk cargo, which accounts for only 26 per cent of UK exports by weight, declined by 10 per cent in 1976. The UK flag share however increased from the 47 per cent recorded in 1975 to a record 52 per cent in 1976. The principal commodities exported as bulk cargoes are crude fertilisers and coal together accounting for just over 80 per cent of the total.

The average length of haul of dry bulk cargo exports was 1118 nautical miles in 1976, the UK flag figure being 708. The difference between these figures and the comparable figure for imports reflects the completely different patterns of trade.

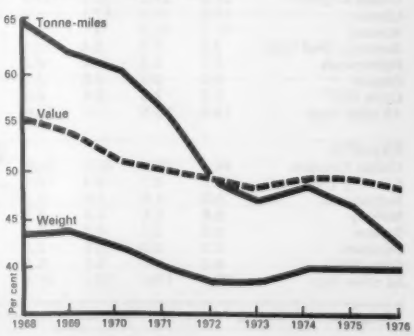
Other dry cargo

Imports. The weight of other dry cargo imported by sea increased by 8 per cent in 1976; the increase in terms of tonne-miles was identical. The UK flag share in weight terms increased from 37 to 38 per cent, but in tonne-miles it decreased from 43 to 41 per cent.

Exports. The weight of other dry cargo exported by sea increased by 7 per cent in 1976, although in tonne-mile terms there was no increase at all. The UK flag share declined in weight terms from 44 to 42 per cent and in tonne-mile terms from 49 to 44 per cent.

Graph 1 below shows the UK flag share

Graph 1 UK percentage flag share of UK other dry cargo trade



Overseas trade analysed in terms of industries: 1976

United Kingdom overseas trade for 1976 is analysed in the table in terms of industries (as defined by the standard industrial classification), in contrast to the standard overseas trade statistics classification.

Every commodity heading in the trade statistics has been reclassified according to the industry of which the commodity is the principal product.

This series of statistics, derived from the basic material of the overseas trade statistics, was first presented in an article in the February 1975 issue of *Economic Trends*. The article discussed the uses and limitations of this alternative form of presenting trade data together with figures for the years 1970 to 1973.

Business Monitor

In November of 1975 the first Business Monitor on this subject (M 10) extended the series to the year 1974 and in August of last year the series was brought up to 1975. Information for 1976 will be published in a further Business Monitor in the near future and will cover 132 separate industries (MLHs), grouped under 20 industrial orders, figures for which are given in the summary table below. This monitor will also give quarterly data for 1976 and revised annual data for 1975.

Inquiries: 01-212 8815.

1976 (provisional figures based on December 1976 cumulatives) £ million current prices

SIC order no.	Industry	Imports cif	Exports fob
I	Agriculture, forestry and fishing	2 521	344
II	Mining and quarrying	5 141	137
III	Food, drink and tobacco	3 459	1 573
IV	Coal and petroleum products	1 094	1 187
V	Chemicals and allied industries	2 120	3 113
VI	Metal manufacture	1 926	1 337
VII	Mechanical engineering	1 946	3 770
VIII	Instrument engineering	592	641
IX	Electrical engineering	1 968	2 429
X	Shipbuilding and marine engineering	156	300
XI	Vehicles	2 117	3 743
XII	Metal goods not elsewhere specified	1 913	2 483
XIII	Textiles	1 336	1 268
XIV	Leather, leather goods and furs	150	173
XV	Clothing and footwear	668	348
XVI	Bricks, pottery, glass, cement, etc	206	395
XVII	Timber furniture, etc	941	164
XVIII	Paper, printing and publishing	1 374	532
XIX	Other manufacturing industries	490	694
XXI	Gas and electricity	—	1
	Miscellaneous [1]	175	224
	Residual heading	920	922
	Total UK trade	31 213	25 778

Imports and exports of certain restricted items are not included in industry totals but in the residual heading.
[1] The miscellaneous heading includes paintings, sculptures, antiques, stamps of philatelic interest, cinematograph film, photographic prints, etc.

Table 1 United Kingdom seaborne trade 1968-76

Total (imports and exports combined) — Percentage carried by UK registered ships

by tonne-miles

thousand million tonne miles — percentage of tonne-miles

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1968	1969	1970	1971	1972	1973	1974	1975	1976
Dry cargo	308	315	330	358	347	358	331	317	325	58	55	51	52	48	41	40	41	35
Bulk	127	135	152	175	165	160	176	170	173	48	46	41	48	44	34	32	36	28
Other	181	180	178	183	181	198	155	141	153	65	62	60	56	49	47	48	46	42
Tanker cargo	638	784	845	939	938	1 064	1 069	818	685	23	29	31	30	28	29	29	29	32
All cargo	946	1 099	1 175	1 296	1 284	1 422	1 400	1 134	1 011	33	36	37	37	33	33	31	32	33

by weight

weight: million tonnes — percentage of weight

Dry cargo	98	103	107	108	110	122	121	109	117	43	43	41	42	40	37	37	38	37
Bulk	51	54	57	56	56	62	70	62	66	44	41	41	43	41	36	34	37	35
Other	48	49	50	52	54	60	51	47	50	43	43	42	40	38	38	40	40	40
Tanker cargo	121	131	143	148	147	155	146	119	121	26	30	30	30	27	30	28	31	33
All cargo	220	234	250	256	257	277	268	228	237	34	36	34	34	33	33	32	34	35

by value

value: £ million — percentage by value

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1968	1969	1970	1971	1972	1973	1974	1975	1976
Dry cargo	10 539	11 413	12 754	14 018	15 209	20 222	27 145	30 292	38 943	53	52	49	48	48	46	47	47	46
Bulk	982	1 012	1 134	1 150	1 195	1 677	3 095	3 204	3 865	34	32	30	31	30	27	28	31	29
Other	9 558	10 401	11 621	12 868	14 015	18 546	24 050	27 087	35 079	55	54	51	50	49	48	49	49	48
Tanker cargo	1 041	1 041	1 102	1 393	1 316	2 007	5 450	4 998	6 667	29	32	31	30	29	30	29	32	33
All cargo	11 580	12 454	13 856	15 411	16 585	22 231	32 596	35 290	45 610	50	50	48	46	46	45	44	45	44

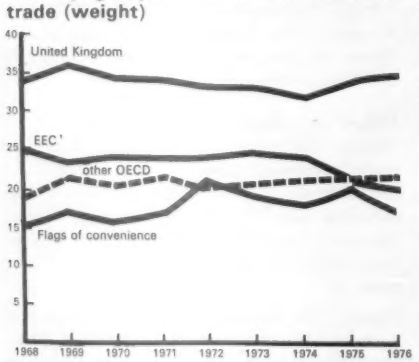
combined for imports and exports in terms of weight, tonne-miles and value. It is significant to note the almost constant figure in terms of weight and the quite marked decline in terms of tonne-miles.

Trade carried by flag

The proportion by weight and value of UK seaborne imports and exports carried by the most important flags are shown in table 2. Among the principal nations only Japan is not sufficiently important to be separately identified.

The bar chart shows separately for imports and exports, by weight and value, the UK flag share of UK seaborne trade with various country group areas.

Graph 2 **Flag share percentages of certain country groups in total UK seaborne trade (weight)**



¹ EEC countries other than the UK

Business Monitor M 8

A full analysis of the seaborne trade of the United Kingdom appears in Business Monitor M 8, with the same title as this article. It is published annually and gives a detailed breakdown of UK sea trade by country, flag, average lengths of haul and individual commodity trades. The latest monitor, with 1976 figures, will be available later this month, and can be obtained from Her Majesty's Stationery Office, PO Box 569, London SE1 9NH. Copies can also be obtained over the counter at either the Department of Industry's Central Library, 1 Victoria Street, London SW1H 0ET or at the Department of Trade's Statistics and Market Intelligence Library, Export House, 50 Ludgate Hill, London EC4M 7MU.

Notes

A full list of notes and definitions can be found in the Business Monitor. Bulk, other dry and tanker cargoes are described in terms of commodities; these are set out in the Business Monitor.

The seaborne trade statistics cover the same field as the overseas trade statistics but exclude the following categories of trade: parcel post; trade not classified according to commodity, trade where the flag of the carrying vessel is not known; newly built ships moving under their own power; trade by air; and trade across the Irish land boundary.

Any measure of the share of UK trade carried by UK ships is not the same as that carried by the UK shipping industry since the latter would include foreign ships chartered in by UK shipping companies and exclude UK ships chartered out to foreign shipping companies.

More detailed information about UK trade than that available in the Business Monitor is obtainable from: The Controller, Statistical Office, HM Customs and Excise, Portcullis House, 27 Victoria Avenue, Southend-on-Sea, Essex SS2 6AL.

Analyses of UK trade by port can be found in the National Ports Council annual publication, *Digest of Port Statistics*.

Inquiries: 01-212 6960.

Table 2 Importance in UK trade of the main individual flags 1974-76

percentages

	All cargo						Dry cargo						Tanker cargo					
	Weight			Value			Weight			Value			Weight			Value		
Flag	1974	1975	1976	1974	1975	1976	1974	1975	1976	1974	1975	1976	1974	1975	1976	1974	1975	1976
Imports																		
United Kingdom	28.9	31.2	31.6	39.2	40.0	41.2	32.6	34.6	32.8	43.0	42.9	44.0	26.5	28.8	30.7	27.1	29.2	31.0
Liberia	18.6	18.9	17.1	6.9	6.5	5.8	8.4	9.9	10.8	1.5	1.6	1.6	25.1	25.2	22.1	23.9	24.2	21.0
Norway	11.7	10.3	9.1	6.7	6.2	5.1	10.6	10.0	11.2	5.0	5.0	4.4	12.4	10.6	7.5	12.1	10.4	7.7
Germany (Fed Rep)	5.6	5.8	6.4	10.8	10.6	10.2	10.7	10.3	9.8	13.3	12.8	12.0	2.2	2.6	3.6	2.7	2.9	3.8
Netherlands	5.7	5.4	5.6	6.4	6.0	6.1	6.7	6.4	6.1	6.7	6.3	6.2	5.1	4.7	5.3	5.5	5.1	5.7
Greece	5.4	4.3	4.6	2.6	2.1	2.2	5.0	3.4	5.4	1.5	1.4	1.8	5.6	4.9	3.9	5.8	4.9	3.8
Other EEC[1]	7.3	7.6	8.6	8.8	10.5	11.0	6.2	7.0	6.7	9.1	11.1	11.3	8.0	8.1	9.9	7.8	7.8	9.7
All other flags	16.8	16.5	17.0	18.6	18.1	18.4	19.8	18.4	17.2	19.9	18.9	18.7	15.1	15.1	17.0	15.1	15.5	17.3
Exports																		
United Kingdom	44.4	45.9	45.0	50.6	51.5	48.8	45.2	45.1	46.1	50.9	51.6	49.1	42.5	47.9	43.1	44.8	49.6	44.0
Germany (Fed Rep)	10.2	9.3	8.4	10.1	8.6	9.0	13.5	12.5	11.5	10.5	8.9	9.3	2.3	1.8	2.7	3.4	2.7	3.7
Netherlands	6.6	6.9	5.9	5.3	5.2	5.5	8.1	8.5	7.9	5.4	5.3	5.7	3.1	3.0	2.3	3.5	3.2	2.5
Norway	6.0	5.3	6.0	3.2	3.5	3.1	5.8	5.6	5.6	3.0	3.4	2.9	6.5	4.7	6.7	6.1	4.5	6.2
Greece	2.5	3.6	6.0	1.4	1.5	2.6	1.7	1.8	2.4	1.2	1.2	2.1	4.5	7.8	12.5	3.8	6.9	11.3
Denmark	3.7	3.3	3.5	2.6	2.7	3.4	3.7	3.7	3.7	2.5	2.7	3.4	3.7	2.3	3.3	4.2	2.5	3.5
Other EEC[1]	6.2	6.1	5.8	5.4	6.0	7.3	4.3	5.2	5.3	5.3	5.8	7.5	10.5	8.5	7.1	8.4	6.7	6.0
All other flags	20.4	19.6	19.4	21.4	21.0	20.3	17.7	17.6	17.5	21.2	21.1	20.0	26.9	24.0	22.3	25.8	23.9	22.8

[1] Belgium, Luxembourg, France, Italy, Republic of Ireland and Denmark (imports).

UK seaborne trade by value, weight, area and flag share: 1976

by value

	Imports £ million	Exports £ million
EEC	4 855.4	4 155.7
	2 169.2	1 415.8
	2 652.7	1 742.3
Scandinavia and Baltic	366.1	478.9
	1 594.9	1 062.9
	845.1	558.7
Iberia and Mediterranean	848.4	1 145.3
	141.5	237.2
	983.5	918.5
West and Central Africa	217.3	418.7
	42.0	102.7
	279.7	309.7
South and East Africa	341.7	525.6
	51.7	136.9
	353.1	192.3
The Gulf and Indian Ocean	1 258.7	685.4
	166.9	235.2
	2 279.8	841.3
Far East	598.9	484.6
	277.9	131.8
	821.1	373.8
Australasia	503.9	519.3
	29.4	54.0
	196.2	262.8
North America	1 128.8	900.1
	296.1	202.3
	1 394.1	969.7
Central and South America	326.4	277.9
	122.9	195.6
	231.6	180.6
West Indies	121.9	139.0
	2.2	4.2
	152.2	86.3

by weight

	'000 tonnes	'000 tonnes
EEC	16 177.4	16 873.6
	5 928.5	4 185.1
	15 495.6	9 430.8
Scandinavia and Baltic	3 010.3	1 974.2
	10 023.9	2 044.6
	9 159.7	4 449.0
Iberia and Mediterranean	2 816.6	1 298.4
	786.5	457.5
	8 365.7	2 316.2
West and Central Africa	2 497.5	1 009.7
	121.6	171.7
	4 903.7	929.9
South and East Africa	940.1	553.2
	128.4	101.3
	1 929.3	374.5
The Gulf and Indian Ocean	21 775.7	779.9
	825.2	260.1
	43 885.9	1 139.1
Far East	616.5	494.9
	337.7	106.0
	1 101.6	459.4
Australasia	1 800.8	531.2
	63.2	48.6
	2 854.6	384.2
North America	4 604.6	1 031.1
	440.7	215.6
	9 926.7	2 721.1
Central and South America	2 208.1	276.2
	210.4	194.1
	5 678.3	424.4
West Indies	916.2	217.5
	11.9	3.6
	1 802.8	136.8

Engineering industries: new quarterly and three-monthly indices of production

Quarterly indices of production, seasonally adjusted, for each of the 33 industries in the engineering sector are published for the first time. Monthly index numbers of production for each of the three broad sectors of the engineering industry – mechanical, instrument and electrical (orders VII, VIII and IX of the standard industrial classification) – have been published in *Trade and Industry* and in the *Monthly Digest of Statistics* for many years. Recent improvements in the quality, price deflation and general processing of the underlying data have now made it possible to calculate these measures of output for each of the 33 industries comprising these broad sectors. Annual index numbers of production at this level up to 1976 (1970 = 100) were published in an article in *Trade and Industry*, 10 July 1977, which also described the nature of the underlying improvements to the series. This article and the accompanying table take the process further.

Presentation of industry series

The number of firms returning information used in the compilation of the index numbers is less adquate for individual industries than for the three broad sectors. Because of this and because engineering production is measured by sales of completed products, which fluctuate with the incidence of 'lumpy' or high value items, the monthly industry series tend to be rather erratic. The data are also subject to substantial revisions, especially for the most recent periods, on account of late and revised returns from industry.

For these reasons it has been decided to make available only quarterly series at the individual industry level. These quarterly figures will, however, be published in *Trade and Industry* each month, together with the average indices for the most recent three months if other than a calendar quarter, for industries where the coverage is adequate. These will provide an indication of current trends, and a short commentary will acompany the table as appropriate.

The index numbers presented in this way will normally be one month less up-to-date than the latest index numbers for the three engineering sectors published by the Central Statistical Office. This is because the inadequacies of incomplete and early information are less serious at this higher level of aggregation.

Commentary

Production of the combined engineering industries, after remaining at a low level throughout 1976, increased very slightly over the five months from the fourth quarter of last year to the period March to May 1977, from 103.2 to 104.0. Output in the mechanical engineering sector rose by 1 per cent from the trough reached in the fourth quarter, while the growth of output experienced in electrical engineering during 1976 slackened somewhat. Production in the instrument engineering sector fell back marginally from the high level attained in the last three months of last year.

Within the mechanical engineering sector, the commencement of the recovery in output was by no means widespread. The growth in recent months reflected substantial increases in deliveries of industrial engines, construction equipment, food processing machinery and packaging and bottling machinery and products of MLH 339.9, a mixed category of 'other non-electric machinery'. Over the same five month period production of agricultural, textile and mining machinery fell back sharply and that of other mechanical engineering industries showed only moderate changes. Production of scientific and indus-

Indices of production for engineering industries

Seasonally adjusted volume indices

		1970 = 100				1976				1977	
MLH		Weight (percentage)	1974	1975	1976 p	1st qtr	2nd qtr	3rd qtr p	4th qtr p	1st qtr p	Mar-May average p [1]
3310	Agricultural machinery	1.05	132.1	113.5	107.0	107.5	100.1	104.6	115.6	109.1	101.0
3320	Machine tools	4.01	77.7	73.6	61.3	66.9	60.5	56.3	61.7	61.5	58.8
3330	Pumps, valves, compressors	4.36	112.6	111.2	106.8	106.2	106.9	104.7	109.3	111.1	111.4
3340	Industrial engines	1.61	108.6	125.9	123.3	127.3	128.8	120.9	116.2	135.2	139.7
3350	Textile machinery	2.25	111.3	111.8	75.1	99.1	79.1	67.0	64.5	55.6	50.6
3360	Construction equipment	2.82	120.2	127.8	124.3	126.0	126.7	121.6	123.0	135.7	135.9
3370	Mechanical handling equipment	3.47	106.7	116.2	104.4	105.5	104.9	103.6	103.4	106.0	105.2
3380	Office machinery [3]	2.03	..	..	..	..	..	..	..	..	..
3391	Mining machinery	1.04	136.0	171.0	159.6	165.9	164.6	153.6	154.0	143.4	143.5
3392	Printing and paper machinery	1.02	111.6	100.0	90.5	88.9	88.9	96.2	87.8	89.6	89.4
3393/4	Refrigerating and space-heating machinery	2.32	104.7	99.4	92.7	93.2	89.6	92.8	95.4	96.7	96.1
3395/6	Weighing machinery and power tools	1.08	110.3	102.8	101.8	88.4	96.1	120.4	102.3	100.1	.. [3]
3397/8	Food processing machinery: packaging machinery	1.53	119.5	128.3	119.3	125.7	123.9	123.0	104.5	109.0	108.2
3399	Other non-electrical machinery	4.99	95.2	84.7	80.4	81.1	88.3	78.3	73.9	89.3	85.7
3410	Industrial plant	11.03	99.8	98.2	90.9	95.9	90.5	93.4	84.0	82.0	81.8
3491	Ball bearings	3.17	115.2	109.9	107.0	103.2	106.7	108.2	109.7	108.2	108.3
	Other mechanical engineering	7.40	115.5	105.0	95.7	99.6	99.8	92.3	91.1	93.2	95.9
	Mechanical engineering [2]	55.16	107.2	105.2	97.1	99.4	98.6	96.1	94.5	96.2	95.5
3510	Photographic and copying equipment	0.80	101.5	96.1	94.7	85.9	97.5	88.9	106.5	100.6	104.6
3520	Watches and clocks	0.53	141.8	144.7	128.6	125.5	123.0	130.1	136.0	123.8	112.8
3530	Surgical instruments	1.18	145.6	137.3	123.0	125.0	128.4	118.5	119.9	125.1	131.3
3540	Scientific and industrial instruments	5.69	112.4	115.5	113.9	110.2	115.1	111.2	119.2	116.7	118.5
	Instrument engineering	8.19	118.0	118.6	114.3	110.9	115.8	111.2	119.1	116.8	118.6
3610	Electrical machinery	7.25	93.0	97.9	94.7	91.2	97.7	94.8	94.9	99.6	100.6
3620	Wires and cables	2.91	110.0	93.5	95.2	91.3	95.4	95.3	98.8	101.2	102.4
3630	Telecommunications	3.28	117.5	114.4	99.9	110.9	105.6	96.0	87.0	82.5	81.1 [4]
3640	Electronic components	5.48	145.7	111.4	113.3	104.0	113.2	113.3	122.8	125.8	128.7
3651	Records and tapes	0.42	194.3	197.4	188.5	187.2	203.3	181.5	181.9	210.1	218.9
3652	Broadcasting equipment	2.75	199.0	168.6	158.0	132.8	147.7	172.9	178.7	150.4	133.4
3660	Computers	1.43	135.0	158.8	169.2	171.0	158.9	169.9	176.9	177.3	176.0
3670	Electronic capital goods	4.30	93.4	97.1	100.1	97.7	100.7	101.4	100.7	103.6	105.4
3680	Domestic electrical appliances	2.99	143.4	134.4	123.4	118.9	112.5	132.2	129.7	138.0	129.9
3691	Electric parts for vehicles	1.90	120.6	95.9	96.4	100.5	98.1	93.4	93.6	97.5	100.2
3692/3	Batteries	1.46	119.0	117.2	116.9	120.9	126.8	113.1	106.7	120.4	126.7
3694/5	Lamps and other electrical	2.50	104.9	95.6	91.8	91.7	92.9	91.5	91.2	94.4	96.0
	Electrical engineering	36.65	122.6	113.2	110.4	106.9	110.3	111.7	112.8	114.2	113.5
	Combined engineering [2]	100.00	113.7	109.2	103.4	103.1	104.3	103.1	103.2	104.5	104.0

p Provisional estimates.

[1] Averages for other than a calendar quarter should not be compared with those in the preceding column; the estimates are not independent and are subject to erratic variation and later revisions. Comparisons with earlier quarters provide more reliable guides to recent trends. [2] The series for office machinery is being revised; it is hoped to publish the amended series soon. The index numbers for all mechanical engineering and combined engineering will consequently undergo slight revisions. [3] April and May figures not available owing to insufficient response. [4] The figure shown is the average for February to April; later figures not available owing to insufficient response.

trial instruments and of photographic and copying equipment eased back a little from the relatively high levels reached in the fourth quarter, while the small watches and clocks industry showed a marked fall; manufacturers' sales of surgical instruments, however, made some further recovery.

In the broadly stable level of output of the electrical engineering group of industries in recent months, there has been a partial recovery in the depressed electrical machinery industry and modest growth in sales of wires and cables, electronic capital goods and electronic components, with some upturn in batteries and electrical parts for vehicles, associated with the moderate recovery in the vehicles industry. Sales of the small records and tapes sector increased sharply but the larger computers and domestic electrical appliances industries showed little change. Sales of the telecommunications industry fell further, reflecting very low demand, and output of broadcasting equipment also showed a sharp decline over the five months from the fourth quarter of last year to March-May 1977.

Inquiries

On the article and the statistics: Mr I. P. Tutt, Branch EcS3A, Department of Industry, Room 618, Dean Bradley House, 52 Horseferry Road, London SW1P 2AG, tel. 01-212 5770.

Requests for quarterly indices for past years: Mr G. Robinson, Branch 5, Central Statistical Office, Great George Street, London SW1P 3AQ, tel. 01-233 8310.

Retail sales in July

Volume

The final seasonally adjusted index of the volume of retail sales in July is 107.0, a little lower than the provisional estimate of 107½, but still well above the level of recent months. The recovery in July is concentrated in the sales of non-food shops where trade may have been influenced by comparatively buoyant annual 'sales' and by the postponement this year of some 'sales', particularly in Central London, from June until July. There was also a sharp increase in retailers' instalment credit lending in July (see next page).

In the three months May to July the volume of total trade was 1 per cent higher than in the previous three months. For the main components of total trade, the volume of sales by durable goods shops was 4 per cent higher than in the previous three months. Sales by clothing and footwear shops were little changed while sales by 'other non-food' shops, which include department stores and mail order businesses, rose by 1 per cent. Sales by food shops were little changed between these periods.

Value

Based on non-seasonally adjusted data, the value of total retail sales in July was 16 per cent higher than in July 1976. In the first seven months of 1977 the average value of sales was 14 per cent higher than in the corresponding period of 1976.

Inquiries: 01-215 3705.

The indices for all shops, food shops, and total non-food shops are shown to the first decimal place to help interpretation, but should not be regarded as necessarily accurate to the final digit. The best indication of the recent trend is normally obtained by comparing the average index for the latest three months with the average for the immediately preceding three months, but month to month fluctuations may sometimes make it preferable to average two months or four months.

When using the volume figures, it should be borne in mind that, when price increases are large, the various problems associated with revaluation of the value series to constant prices become more acute. Thus, the relative accuracy with which volume changes have been measured is likely to have been reduced in recent periods.

The monthly periods consist of four weeks except those marked [1] which are of five weeks. The July 1977 sales period was the four weeks from 3 July 1977 to 30 July 1977. The corresponding period in 1976 was the four weeks from 4 July 1976 to 31 July 1976.

The value estimates are compiled inclusive of VAT, and will, therefore, reflect changes in the rates of VAT. The volume estimates, however, are not affected by these changes since the retail price indices used to 'deflate' the value data are themselves inclusive of VAT.

Within the total, sales are analysed by 'kinds of business'; ie the statistics are of sales by particular kinds of shop rather than of sales of particular commodities. For example, while sales by shops classified as food shops are mainly of food, many of them also sell other goods. Similarly, some food is sold by shops classified to other kinds of business.

The seasonally adjusted series include, where appropriate, adjustments for the timing of holidays (including the extra Jubilee bank holiday) and adjustments to make allowance for the inclusion of an extra week in the January 1975 trading period. No adjustments are made to the non-seasonally adjusted data.

The article giving the *provisional* estimate of the seasonally adjusted index of the volume of retail sales for August and the increase in the value of sales compared with a year earlier will be published later this month.

Table 1 Volume of retail sales seasonally adjusted

Index numbers of sales per week (average 1971 prices) 1971 = 100

(Sales in 1971 £ million Provisional estimates)	All kinds of business (15 895)	Food shops (6 693)	Non-food shops Total (9 202)	Clothing and footwear shops (2 314)	Durable goods shops (1 801)	Other non-food shops [2] (5 087)
1971	100.0	100.0	100.0	100	100	100
1972	105.8	101.5	109.0	105	115	109
1973	110.7	101.0	117.7	109	127	118
1974	109.9	101.8	115.9	107	123	117
1975	107.9	99.3	114.2	108	121	115
1976	108.1	99.1	114.6	108	124	114
1975						
1st qtr	111.1	100.8	118.6	112	129	118
2nd	109.2	99.0	116.6	108	130	116
3rd	105.4	98.1	110.6	107	111	112
4th	105.7	99.1	110.4	105	113	112
1976						
1st qtr	107.3	99.3	113.0	107	119	114
2nd	107.6	99.8	113.3	107	122	113
3rd	108.9	99.0	116.1	108	128	115
4th	108.5	98.2	116.0	108	128	115
1977						
1st qtr	105.0	94.9	112.3	108	118	113
2nd	103.9	95.3	110.0	103	119	110
1976						
June [1]	107.3	98.9	113.4	108	122	113
July	108.8	99.7	115.5	108	128	115
August	108.9	99.4	115.9	108	128	115
September [1]	108.9	98.2	116.8	110	128	116
October	108.1	98.0	115.4	107	129	115
November	109.2	97.9	117.4	108	130	117
December [1]	108.3	98.6	115.4	108	127	115
1977						
January	106.7	94.2	115.8	113	123	115
February	105.7	95.5	113.1	107	120	113
March [1]	103.1	95.0	109.0	104	111	111
April	103.4	94.6	109.8	102	121	109
May	104.4	95.8	110.6	105	116	111
June [1]	103.8	95.5	109.8	101	119	111
July	107.0	94.3	116.3	110	129	115
1977						
February-April	104.0	95.0	110.5	104	117	111
1977						
May-July	105.0	95.2	112.0	105	121	112
Percentage increase	+1.0	+0.2	+1.4	—	+4	+1

[1] Five-week period. [2] Including department stores and mail order businesses.

Table 2 Value of retail sales seasonally adjusted

Index numbers of value of sales per week (current prices) 1971 = 100

(Sales in 1971 £ million Provisional estimates)	All kinds of business (15 895)	Food shops (6 693)	Non-food shops Total (9 202)	Clothing and footwear shops (2 314)	Durable goods shops (1 801)	Other non-food shops [2] (5 087)
1971	100.0	100.0	100.0	100	100	100
1972	112.0	108.9	114.2	112	118	114
1973	126.9	122.8	129.9	128	136	128
1974	146.7	144.5	148.2	149	143	150
1975	174.5	174.6	174.4	172	166	178
1976	200.3	204.4	197.3	190	186	205
1975						
1st qtr	166.0	162.3	168.6	171	162	170
2nd	174.2	172.7	175.3	169	178	177
3rd	176.7	178.9	175.0	174	161	181
4th	181.7	185.5	178.9	173	165	186
1976						
1st qtr	190.3	193.0	188.4	182	186	195
2nd	195.1	199.8	191.8	186	180	199
3rd	203.8	207.6	201.1	194	190	208
4th	211.9	217.3	208.0	199	197	216
1977						
1st qtr	217.1	222.4	213.2	207	190	224
2nd	221.6	230.1	215.6	203	196	228
1976						
June [1]	195.6	199.9	192.5	188	178	199
July	200.2	204.1	197.4	190	189	204
August	204.2	208.4	201.2	193	191	209
September [1]	206.4	209.7	204.0	198	191	212
October	207.7	212.3	204.3	195	196	212
November	212.9	217.5	209.6	198	199	218
December [1]	214.5	221.3	209.6	202	195	218
1977						
January	217.6	218.6	216.9	214	196	226
February	218.1	224.3	213.6	206	194	224
March [1]	215.8	224.0	209.8	204	182	222
April	219.5	226.0	214.8	200	201	226
May	221.8	229.8	216.0	207	193	228
June [1]	223.2	233.5	215.8	202	195	229
July	232.8	236.4	230.2	223	212	240
1977						
February-April	217.6	224.7	212.5	203	192	224
1977						
May-July	225.7	233.3	220.3	210	200	232
Percentage increase	+3.7	+3.8	+3.7	+3	+4	+4

[1] Five-week period. [2] Including department stores and mail order businesses.

Hire purchase and other instalment credit business in July

New instalment credit advanced by finance houses and retailers amounted to £363 million in July (seasonally adjusted). Within this total, finance houses' lending was virtually the same as in June and retailers' lending showed a marked increase. (Total retail sales in July also showed a marked increase.) In the latest three-month period, May to July 1977, total advances by finance houses and retailers were 3 per cent up on the previous three months, February to April. Finance houses' lending increased by 4 per cent between these two periods and retailers' lending by 2 per cent.

The average weekly value of retailers' instalment credit sales in July was substantially higher than in previous months. Credit sales by durable goods shops were 5 per cent higher during the three months May to July than in the preceding three months. Sales by department stores fell by 2 per cent and those by other instalment credit retailers (including mail-order houses) increased by 2 per cent between the two three-monthly periods.

The debt outstanding to finance houses and retailers increased by £46 million in July, bringing the total increase in the three months May to July to £133 million compared to £147 million in the three months February to April. Amounts outstanding to finance houses increased by £122 million and those to retailers by £11 million during the latest three-month period. At the end of July the total amount outstanding to finance houses and retailers was £2,906 million (not seasonally adjusted), 22 per cent more than a year earlier.

Official reserves

The UK official reserves rose by $1,430 million during August. In the month a drawing of $100 million was made on the second tranche of the HMG $1.5 billion loan, and a drawing of $374 million was made on the IMF standby. At the end of August the reserves stood at $14,852 million.

In round terms $1,430 million, $100 million, $374 million and $14,852 million are respectively equivalent to £820 million, £57 million, £215 million and £8,521 million when converted at the closing market rate on 31 August of £1 = $1.7429.

Manufacturers' stocks in June

It is estimated that manufacturers' stocks rose by about £60 million at 1970 prices, seasonally adjusted, in June. The bulk of the rise was probably in finished goods with little change in stocks of materials and fuel or work in progress.

Monthly figures from January 1975, adjusted to agree with the revised quarterly figures published in the 2 September issue and to incorporate updated seasonal adjustments, are shown below:

1970 prices seasonally adjusted £ million

	1975	1976	1977
Jan	−10	+20	−10
Feb	n/c	n/c	+60
Mar	−20	−20	+70
Apl	−10	−70	+10
May	−10	+40	+60
Jun	−60	−40	+60
Jul	−70	−40	
Aug	−50	n/c	
Sep	−90	+40	
Oct	−80	+20	
Nov	−30	n/c	
Dec	−10	+50	

n/c No change

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Table 1 Hire purchase and other instalment credit business seasonally adjusted

£ million

	Total		Finance houses [1]		Retailers [2]	
	New credit extended	Change in debt	New credit extended	Change in debt	New credit extended	Change in debt
1971	2 053	240	990	165	1 063	75
1972	2 497	424	1 222	296	1 275	128
1973	2 871	438	1 453	332	1 418	106
1974	2 517	−155	1 037	−160	1 480	5
1975	2 992	−10	1 210	−55	1 791	45
1976	3 610	342	1 535	202	2 075	140
1975						
1st qtr	713	−8	284	−9	429	1
2nd	757	12	307	−13	450	25
3rd	750	−5	304	−18	446	13
4th	772	−9	306	−15	466	6
1976						
1st qtr	842	40	340	4	502	36
2nd	873	76	382	56	491	30
3rd	917	105	393	59	524	46
4th	978	121	420	83	558	38
1977						
1st qtr	1 017	143	460	87	557	56
2nd	1 057	134	489	122	568	12
1976						
November	335	50	142	25	193	25
December	331	34	148	34	183	—
1977						
January	324	43	135	13	189	30
February	342	50	157	33	185	17
March	351	50	168	41	183	9
April	349	47	154	41	195	6
May	358	40	171	46	187	−6
June	350	47	164	35	186	12
July	363	46	163	41	200	5
1977						
February-April	1 042	147	479	115	563	32
May-July	1 071	133	498	122	573	11
Percentage increase	3		4		2	

[1] Direct business only: ie excluding agreements block discounted with finance houses by retailers. [2] Durable goods shops, department stores and 'other instalment credit retailers'. For further definitions see footnote to table 2.

Table 2 Retailers' instalment credit sales seasonally adjusted

Index numbers of value of sales per week (current prices) 1966 = 100

	Total [1]	Durable goods shops	Department stores	Other instalment credit retailers [2]
(HP and other instalment credit sales in 1966 £ million) [3]	(862)	(327)	(46)	(489)
1971	134	138	138	131
1972	158	162	157	155
1973	176	165	181	183
1974	184	132	193	217
1975	218	161	231	254
1976	252	194	257	292
1975				
1st qtr	208	153	228	244
2nd	220	174	223	250
3rd	217	157	229	257
4th	226	163	242	267
1976				
1st qtr	243	189	263	277
2nd	239	187	227	275
3rd	257	196	259	297
4th	272	202	279	317
1977				
1st qtr	272	188	274	327
2nd	279	192	240	341
1976				
November	281	209	307	326
December *	269	195	253	320
1977				
January	275	193	282	330
February	270	186	270	326
March *	270	186	272	326
April	287	194	229	355
May	276	189	231	339
June *	274	193	257	330
July	295	212	272	353
1977				
February-April av.	275	188	258	335
May-July av.	281	198	254	340
Percentage increase	2	5	−2	2

[1] Durable goods shops, department stores and 'other instalment credit retailers'. [2] General stores (other than department stores), general mail order houses and co-operative societies' non-durable goods departments. [3] Excluding sales against checks issued by other organisations.

The monthly periods for retailers consists of four weeks except those marked * which are of five weeks. The period covered by July 1977 sales was the four weeks from 3 July 1977 to 30 July 1977. The corresponding period in 1976 was from 4 July 1976 to 31 July 1976.

Survey of company liquidity: second quarter 1977

After allowing for seasonal variation, the liquidity of the companies replying to the Department of Industry's survey of company liquidity fell in the second quarter of 1977, partly off-setting the rise in the previous quarter. Table 2 shows that, seasonally adjusted, total current assets fell by £40 million and total current liabilities rose by £111 million, so that net current assets (total current assets minus total current liabilities) fell by £151 million, compared with a rise of about £470 million in the previous quarter.

After seasonal adjustment and other adjustments to make the results comparable over the whole period of the survey, the liquidity ratio of the survey companies (here defined as total current assets as a percentage of total current liabilities) fell in the second quarter of 1977. From a trough at the end of 1974, this ratio rose steadily until early 1976 and has fluctuated around a relatively high level since then. Though high compared with the levels of 1974 and 1975, its present level is still lower than the previous peak in the first quarter of 1973.

It must be kept in mind that both net current assets and the liquidity ratio, as defined in the survey, do not summarise the whole financial position of the companies, but only the position on the selected current assets and liabilities covered by the survey, and companies differ widely in the types of assets and liabilities they hold. Also the aggregate changes conceal widely differing movements for individual companies.

On an unadjusted basis, the companies' total current assets fell by £52 million in the second quarter of 1977 and their total current liabilities rose by £112 million, giving a fall in net current assets of £164 million.

Manufacturing and non-manufacturing companies

The fall in net current assets in the second quarter of 1977 took place mainly in the non-manufacturing companies. Table 3, on an unadjusted basis, shows that for the companies engaged mainly in manufacturing, total current assets rose by £110 million and total current liabilities also rose, by £139 million, giving a fall in net current assets of £29 million, compared with a rise of about £200 million in the previous quarter. For the mainly non-manufacturing companies, the table shows that total current assets fell by £162 million and that total current liabilities also fell, by £26 million, giving a fall in net current assets of £136 million, largely off-setting the rise of £164 million in the previous quarter.

Total current assets of the manufacturing companies have risen steadily from the beginning of 1975. Their total current liabilities fell steadily from early 1975 until the first quarter of 1976 and have since generally risen slightly. For the non-manufacturing companies, both total current assets and total current liabilities have remained relatively level since the beginning of 1975. For both types of company, the level of total current liabilities since the beginning of 1975 may have been affected by possible switching from short-term to longer-term borrowing which, as mentioned in the notes at the end of this article, has not been covered by the survey since the beginning of 1975.

Changes in composition of holdings

For the survey companies as a whole, deposits with clearing banks and holdings of local authority bills and temporary money fell sharply in the second quarter of 1977; there was also a slight fall in holdings of local authority mortgages and loans. Holdings of the other types of current assets rose, the main increases being in deposits with other banks, deposits with finance house, and holdings of British government securities.

Table 1 Holdings of current assets and liabilities by survey companies[1]: amounts outstanding at end of period

£ million

	1975				1976					1977	
	2nd qtr	3rd qtr	4th qtr	4th qtr	1st qtr	2nd qtr	3rd qtr	4th qtr	4th qtr	1st qtr	2nd qtr
Number of companies[2]	214	214	214	211	211	211	211	211	210	210	210
NOT SEASONALLY ADJUSTED											
Current assets											
Deposits with banks in the UK:											
Deposit banks/clearing banks[6]	633	615	670	1 904	703	691	823	847	847	951	814
Other banks[6]	989	1 265	1 238		1 301	1 256	1 378	1 256	1 248	1 331	1 371
Deposits with finance houses	78	77	97	97	105	105	112	122	121	108	154
Deposits with building societies	4	3	3	3	3	3	3	3	3	3	3
Negotiable certificates of deposits (sterling and dollar)	107	75	97	97	91	95	111	127	119	122	141
British government securities	155	149	175	175	216	255	257	299	279	286	319
Local authority bills and temporary money	165	190	195	195	164	186	167	250	246	252	193
Local authority mortgages and loans	50	48	53	53	51	40	45	66	67	88	80
Other current assets[3]	27	84	118	118	115	105	131	49	49	62	76
Total current assets[4]	2 209	2 506	2 647	2 642	2 748	2 737	3 027	3 020	2 980	3 203	3 151
Current liabilities											
Advances and loans from banks and other financial institutions in the UK:											
Deposit banks/clearing banks[5, 6]	1 904	1 647	1 596	3 253	1 513	1 774	1 637	2 004	1 943	1 784	1 832
Other banks[5, 6]	1 833	1 818	1 666		1 687	1 564	1 662	1 632	1 540	1 551	1 593
Other financial institutions[7]	95	119	118	121	120	114	117	99	96	100	124
Total current liabilities[4]	3 831	3 584	3 380	3 374	3 320	3 453	3 416	3 736	3 579	3 436	3 548
Net current assets	−1 622	−1 078	−733	−732	−572	−716	−389	−716	−599	−233	−397
Liquidity ratio (per cent)[8]	58	70	78	78	83	79	89	81	83	93	89
SEASONALLY ADJUSTED											
Total current assets	2 247	2 459	2 629	2 624	2 782	2 775	2 955	3 002	2 962	3 229	3 189
Total current liabilities	3 782	3 610	3 421	3 415	3 286	3 425	3 452	3 777	3 618	3 412	3 523
Net current assets	−1 535	−1 151	−792	−791	−504	−650	−497	−775	−656	−183	−334
Liquidity ratio (per cent)[8]	59	68	77	77	85	81	86	79	82	95	91

[1] Companies in the Department of Industry's survey of company liquidity.
[2] The figures are for the number of companies that completed returns for the preceding fourth quarter. Estimates are included until the end of the next fourth quarter for any of these companies that ceased to reply during the year. There is a break in coverage at the end of 1975 and 1976. The two sets of figures given for the fourth quarters show the effect of losing some companies.
[3] Other current assets comprise holdings of notes and coin, Treasury bills, certificates of tax deposit and tax deposit accounts.
[4] Components are rounded independently of the totals.
[5] From the beginning of 1975, including only advances and loans with an initial loan term of not more than 12 months.
[6] To the end of 1975, the figures relate to the former groupings of deposit banks and other banks; from the first quarter of 1976, five banks that were deposit banks have been regrouped as other banks and the remainder renamed clearing banks. Combined figures are given in the second set of figures for the fourth quarter of 1975 to avoid any possibility of disclosure of holdings by individual companies.
[7] Including only advances and loans with an initial loan term of not more than 12 months.
[8] Total current assets as a percentage of total current liabilities.

On the liabilities side, borrowing from both clearing banks and other banks rose; there was also an appreciable rise in borrowing from other financial institutions. At the end of the quarter, borrowing from clearing banks accounted for about 52 per cent of total current liabilities and borrowing from other banks by about 45 per cent.

Notes

Over 200 of the largest United Kingdom industrial and commercial companies contribute to this survey, which covers certain assets and liabilities in the United Kingdom that can be realised or that are due to be paid, formally at least, within 12 months. An article describing the background to the survey, and reviewing the results since its start at the beginning of 1970, was published in *Economic Trends* for November 1974. A further article, in the May 1977 issue of *Economic Trends*, compares the results of the survey with those for all industrial and commercial companies up to the end of 1976.

The companies taking part are not a representative sample of industrial and commercial companies. Not all large companies are included and no small ones.

Another important limitation is that the results can give only part of the complete financial picture that would be given by the full sources and uses of funds account. This applies, in particular, to the two summary measures of liquidity, net current assets and the liquidity ratio, as the article in the November 1974 issue of *Economic Trends* explains. Furthermore, these measures, and the results as a whole, are aggregates for the survey group and they mask wide variation in the financial positions of individual companies.

During the survey some companies have ceased to reply. The results are therefore based on a different number of companies each quarter. In the tables with this article, estimates are included until the end of the year for holdings of companies that ceased to reply during the year, except for companies that ceased to reply because they had amalgamated with other companies in the survey. There have also been some other changes in coverage within companies at the end of 1976, to make the coverage of the liquidity survey as far as possible the same as the coverage of the survey of sources and uses of company funds, which is being started. Two sets of figures are given for the fourth quarters of 1975 and 1976 to show the effects of these various changes.

At the beginning of 1975, the definition of current liabilities was clarified and companies were asked to exclude all advances and loans with an initial loan term of over 12 months. At the beginning of 1976, five banks that were deposit banks were re-grouped with other banks and the remainder of the group has been renamed clearing banks to conform with the reclassification of banks made by the Bank of England in 1975. Total figures for deposits with banks and borrowing from banks are given in the second set of figures for the fourth quarter of 1975 to avoid any possibility of disclosure of individual company holdings as a result of this change.

Inquiries: Departments of Industry, Trade and Prices and Consumer Protection, Economics and Statistics Division 6a, Room 248, 1 Victoria Street, London SW1H 0ET; tel. 01-215 5538.

Guide to government statistics

see centre pages
Trade and Industry,
15 July 1977

Table 2 Changes in holdings of current assets and liabilities of survey companies[1]

£ million

	1970	1971	1972	1973	1974	1975	1976	1975 3rd qtr	1975 4th qtr	1976 1st qtr	1976 2nd qtr	1976 3rd qtr	1976 4th qtr	1977 1st qtr	1977 2nd qtr
NOT SEASONALLY ADJUSTED															
Current assets															
Deposits with banks in the UK:															
Deposit banks/clearing banks[6]	2	49	117	173	73	133	199	−18	55	100	−12	132	24	104	−137
Other banks[6]	−40	91	240	258	21	302		276	−27		−45	122	−122	83	40
Deposits with finance houses	19	52	−21	−17	−101	33	25	−1	20	8	—	7	10	−13	46
Deposits with building societies	—	2	−2	3	−1	−1	—	−1	—	—	—	—	—	—	—
Negotiable certificates of deposit (sterling and dollar)	−1	121	231	−47	−144	−12	30	−32	22	−6	4	16	16	3	19
British government securities	−22	−13	16	39	−39	92	124	−6	26	41	39	2	42	7	33
Local authority bills and temporary money	−32	61	55	121	−120	22	55	25	5	−31	22	−19	83	6	−59
Local authority mortgages and loans	−14	—	14	−10	15	−1	13	−2	5	−2	−11	5	21	21	−8
Other current assets[9]	6	−1	−4	−23	7	92	−69	57	34	−3	−10	26	−82	13	14
Total current assets[4]	−82	362	645	495	−291	663	378	297	141	106	−11	290	−7	223	−52
Current liabilities															
Advances and loans from banks and other financial institutions in the UK:															
Deposit banks/clearing banks[5, 6]	64	−246	162	611	765	−558	383	−257	−51	−53	261	−137	367	−159	48
Other banks[5, 6]	247	115	20	306	913	−100		−15	−152		−123	98	−30	11	42
Other financial institutions[7]	60	−21	27	9	30	9	−22	24	−1	−1	−6	3	−18	4	24
Total current liabilities[4]	371	−153	209	924	1 708	−649	362	−247	−204	−54	133	−37	320	−143	112
Net current assets	−453	515	436	−429	−1 999	1 312	16	544	345	160	−144	327	−327	366	−164
SEASONALLY ADJUSTED															
Total current assets								212	170	158	−7	180	47	267	−40
Total current liabilities								−172	−189	−129	139	27	325	−206	111
Net current assets								384	359	287	−146	153	−278	473	−151

[1] and [4] to [7]: see Table 1. [9] For 1970 to 1973, includes tax reserve certificates in addition to the assets listed in note 3 to Table 1.

Table 3 Holdings of current assets and liabilities by manufacturing and non-manufacturing survey companies[1]: amounts outstanding at end of period

£ million

	1975 2nd qtr	1975 3rd qtr	1975 4th qtr	1975 4th qtr	1976 1st qtr	1976 2nd qtr	1976 3rd qtr	1976 4th qtr	1976 4th qtr	1977 1st qtr	1977 2nd qtr
MANUFACTURING COMPANIES											
Number of companies[2]	145	145	145	143	143	143	143	143	143	143	143
Not seasonally adjusted											
Total current assets[4]	1 015	1 142	1 264	1 260	1 374	1 517	1 709	1 776	1 770	1 892	2 002
Total current liabilities[4]	2 513	2 256	2 059	2 053	1 959	2 060	2 039	2 310	2 255	2 173	2 312
Net current assets	−1 498	−1 114	−795	−793	−585	−543	−330	−534	−485	−281	−310
Liquidity ratio (per cent)[8]	40	51	61	61	70	74	84	77	78	87	87
NON-MANUFACTURING COMPANIES											
Number of companies[2]	69	69	69	68	68	68	68	68	67	67	67
Not seasonally adjusted											
Total current assets[4]	1 193	1 364	1 382	1 382	1 374	1 220	1 319	1 243	1 209	1 312	1 150
Total current liabilities[4]	1 318	1 328	1 321	1 321	1 361	1 392	1 377	1 426	1 323	1 262	1 236
Net current assets	−125	36	61	61	13	−172	−58	−183	−114	50	−86
Liquidity ratio (per cent)[8]	91	103	105	105	101	88	96	87	91	104	93

See notes [1], [2], [4] and [8] to Table 1.

Index of industrial production for Scotland: first quarter 1977

The index of industrial production in Scotland in the first quarter of 1977 is provisionally estimated at 106.3 (1970 = 100). This represents an increase of just under 2 per cent on the level of a year earlier and compares with a slightly smaller rise in the United Kingdom index over the same period.

The strong performance by the manufacturing sector has been the major factor in the rise in the all-industries index. In the first quarter of 1977, the manufacturing index is estimated at 106.2, showing an increase of just over 3½ per cent on the level of a year earlier. The indices of production for the first quarter of 1977 for both mining and quarrying and construction showed falls from the levels of a year earlier – that for mining and quarrying fell by 6 per cent and for construction by 9 per cent. Over the year to the first quarter of 1977, the index for the gas, electricity and water sector rose by 7 per cent.

In making comparisons with the UK index it should be noted that the UK index for mining and quarrying includes production from the continental shelf region whereas the contribution of this region to the Scottish index is through an indicator of the employment income of offshore workers. Output

Table 1 Index of industrial production for Scotland: quarterly results

Quarterly series are not seasonally adjusted (1970 = 100)

			Manufacturing industries															
							Engineering and allied industries											
1968 SIC	Total all industries	Mining and quarrying	Total all manufacturing industries	Food, drink and tobacco	Chemicals coal and petroleum products	Metal manufacture	Total	Mechanical and instrument engineering	Electrical engineering	Vehicles (incl. ships and aircraft)	Metal goods n.e.s.	Textiles, leather and clothing	Bricks, pottery, glass, cement etc	Timber, furniture etc	Paper, printing and publishing	Other manufacturing industries	Construction	Gas, electricity and water
Weight per 1 000	1 000	30	729	170	55	53	270	128	50	65	27	67	24	19	54	17	170	71
1970	100.0	100	100.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1971	99.0	107	98.4	105	110	88	93	86	103	98	100	103	95	100	94	104	100	99
1972	100.9	95	99.6	109	122	86	90	78	111	89	111	107	102	108	94	108	104	110
1973	109.9	106	108.3	114	124	96	100	86	142	92	104	117	101	135	101	136	111	126
1974	107.3	98	108.6	119	134	90	104	86	164	89	107	106	100	122	91	117	97	123
1975	104.0	110	103.9	118	114	74	104	90	147	95	112	100	97	110	79	107	95	123
1976	105.9	108	106.7	118	140	73	105	95	163	78	103	107	97	111	83	108	92	130
1973																		
1st qtr	109.1	103	104.3	107	117	98	98	81	141	96	103	115	94	129	98	123	113	152
2nd	110.6	119	108.7	115	124	101	98	90	124	92	106	121	105	133	101	139	116	114
3rd	104.8	104	104.3	115	125	92	92	83	134	77	98	109	98	130	97	139	113	89
4th	115.3	98	116.0	121	130	96	111	91	170	104	109	121	106	148	110	144	102	147
1974																		
1st qtr	105.0	68	104.7	113	137	84	100	80	163	88	101	101	93	126	89	115	97	144
2nd	109.9	113	112.2	119	139	98	107	88	162	99	114	114	104	130	95	117	101	108
3rd	101.4	100	103.6	120	132	82	94	81	154	70	102	103	98	113	88	115	97	90
4th	102.7	110	113.8	124	127	96	114	96	179	100	111	107	104	121	94	122	92	151
1975																		
1st qtr	104.9	109	103.3	113	114	88	103	89	146	96	112	96	97	115	82	110	92	151
2nd	104.2	118	103.8	116	114	78	104	88	148	98	111	102	100	110	78	108	100	113
3rd	97.8	92	99.0	119	108	64	98	89	131	86	107	98	89	97	75	101	97	90
4th	109.2	119	109.6	124	122	68	112	96	164	102	118	106	101	119	83	109	93	141
1976																		
1st qtr	104.3	110	102.4	110	134	73	101	95	151	70	114	100	96	114	82	105	89	157
2nd	106.7	122	107.6	120	144	75	106	100	158	74	112	105	100	111	80	107	96	116
3rd	98.9	91	101.3	119	135	66	95	88	148	69	91	104	92	103	79	104	93	91
4th	113.8	108	115.4	124	145	78	117	99	197	101	95	117	100	115	91	114	91	154
1977																		
1st qtr	106.3	103	106.2	112	143	77	104	90	165	86	98	113	90	105	84	125	81	168
% change 1977 Q1 on																		
1976 Q1	+1.9	−6	+3.7	+2	+7	+5	+3	−5	+9	+23	−14	+13	−6	−8	+2	+19	−9	+7
1976 on 1975	+1.8	−2	+2.7	0	+23	−1	+1	+6	+11	−18	−8	+7	0	+1	+5	+1	−3	+6

Index of industrial production for the UK: quarterly results

Quarterly series are not seasonally adjusted (1970 = 100)

Weight per 1 000	1 000	37	745	84	65	57	319	115	67	89	48	76	27	22	64	31	146	72
1970	100.0	100	100.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1971	100.3	100	99.5	101	102	91	99	99	102	100	93	102	108	103	97	100	103	104
1972	102.5	84	102.1	105	108	91	99	95	107	101	95	104	115	114	103	104	105	111
1973	110.0	93	110.7	109	120	100	108	104	121	104	103	110	126	133	112	117	107	118
1974	107.0	79	109.1	110	125	92	109	109	123	101	104	103	117	112	109	114	98	119
1975	101.8	86	102.5	109	114	79	104	107	113	97	95	100	108	110	96	105	93	121
1976	102.3	89	103.5	111	125	85	100	99	110	96	93	102	111	112	98	115	89	123
1976																		
1st qtr	104.9	91	104.2	104	123	87	103	105	112	99	96	103	111	114	96	112	90	149
2nd	101.9	90	103.7	113	126	87	100	100	107	98	92	99	112	111	98	114	91	111
3rd	95.7	73	98.5	113	121	78	92	92	104	87	87	97	108	106	95	109	88	94
4th	106.6	102	107.6	113	129	90	104	101	119	99	96	107	113	116	102	126	86	140
1977																		
1st qtr	106.8	107	107.7	109	131	90	105	103	119	99	101	107	109	113	103	126	79	154
% change 1977 Q1 on																		
1976 Q1	+1.8	+18	+3.4	+5	+7	+3	+2	−2	+6	0	+5	+4	−2	−1	+7	+12	−12	+3
1976 on 1975	+0.5	+3	+1.0	+2	+10	+8	−4	−7	−3	−1	−2	+2	+3	+2	+2	+10	−4	+2

from the continental shelf region in the first quarter of 1977 raised the UK mining and quarrying index by about 30 index points above the level it would otherwise have attained. The offshore employment income indicator raised the corresponding Scottish index by 20 index points. Similarly, at the total all-industries level, production from the continental shelf has had the effect of raising the UK and Scottish indices by one index point and by one half of an index point respectively in the first quarter of 1977.

Analysis by industry

The various groupings within the manufacturing sector experienced in general an increase in production over the year to the first quarter of 1977. Marked rises in output were recorded by the vehicles grouping (up by 23 per cent); the textiles, leather and clothing grouping (up by 13 per cent); and the other manufacturing industries grouping (up by 19 per cent). The main contributor to the rise in the output of the other manufacturing industries grouping was the rubber industry (mlh 491), where production rose by almost 30 per cent in the year to the first quarter of 1977. Over the same period, production levels were up in almost all the constituent industries of the textiles, leather and clothing grouping.

Both the chemicals and coal and petroleum products industries (up by 7 per cent) and the electrical engineering industries (up by 9 per cent) maintained the strong growth they had shown between 1975 and 1976 into the first quarter of 1977. In the former of these groupings, part of the improvement between the first quarter of 1976 and the first quarter of 1977 can be attributed to the coal and petroleum products industries whose output increased by almost 20 per cent over this period. In the electrical engineering grouping, large rises in the output of the radio and electronics industry (mlh 364), the radio, radar and electronic capital goods industry (mlh 367) and the 'other electrical goods' industry (mlh 369) were offset by a sharp fall in the output of the telegraph and telephone apparatus and equipment industry (mlh 363).

The largest fall in output in the year to the first quarter of 1977 occurred in the metal goods n.e.s. grouping. The drop in output was almost totally accounted for by the cutlery industry (mlh 392); the wire and wire manufactures industry (mlh 394) and metal industries not elsewhere specified (mlh 399).

While output fell generally throughout the construction sector between the first quarter of 1976 and the first quarter of 1977, the largest drop was recorded in the output of private housing. Only the index for work done by labour directly employed by the public sector was close to the level of a year earlier.

The fall in the mining and quarrying index over the year to the first quarter of 1977 reflected to a great extent a drop in the production of the coal industry (mlh 101). Output in the stone and slate quarrying and mining industry (mlh 102) was also down over the same period.

The gas, electricity and water sector experienced the same growth in output between the first quarters of 1976 and 1977 as it had between the fourth quarters of 1975 and 1976. In both cases, the rise in output resulted from increased gas and electricity production due mainly to a relatively severe winter.

Market sector analysis

A market sector analysis of the Scottish and UK indices of production is given in table 2. This shows that over the year to the first quarter of 1977, production had risen in the consumer goods sector (up by over 6 per cent), the investment goods sector (up by over 1 per cent) and in the intermediate goods sector (up by over 3 per cent).

Much of the rise in the consumer goods sector is the result of the increased output of the consumer durables group between the first quarters of 1976 and 1977; within this group a large increase in the output of the car industry was offset by a smaller fall in the production of the drink and tobacco industries. Both the investment and intermediate goods indices for the first quarter of 1977 are at their highest first quarter levels since 1973.

Notes

The index of industrial production for Scotland (based on 1970 = 100) was first published in the *Scottish Economic Bulletin* no. 10 in July 1976. This article is one of a series providing the latest figures on a quarterly basis. The complete series will also be published in each issue of the *Scottish Economic Bulletin* showing the latest figures at the time of going to press. For details of the sources and methods of the index of industrial production, reference should be made to the relevant article in bulletin no. 10.

The index is not seasonally adjusted. Because of fluctuations from quarter to quarter within a year resulting from, for example, the incidence of holidays, comparisons for one quarter with the immediately previous quarter do not reflect the underlying trend; more meaningful comparisons – as used in this article are between one quarter and the same quarter of the previous year and, of course, between one year and another. The UK unadjusted index (based, like the Scottish index, on 1970) is the most relevant for comparison with the Scottish index.

The manufacturing and construction indices have been revised to take account of classification and other changes. A number of firms which were previously included in the register of construction firms have been reclassified as 'structural steel fabricators' and have been transferred to the mechanical engineering grouping in the manufacturing

Table 2 Index of industrial production: market sector analysis

Quarterly series are not seasonally adjusted (1970 = 100)

	Scotland						United Kingdom					
	All industries other than construction	Consumer goods			Investment goods	Intermediate goods	All industries other than construction	Consumer goods			Investment goods	Intermediate goods
1968 SIC		Total	Durable	Non-durable				Total	Durable	Non-durable		
Weights[1]	830	271	42	229	220	339	850	250	61	189	238	362
1970	100.0	100.0	100	100	100.0	100.0	100.0	100.0	100	100	100.0	100.0
1971	98.8	105.6	110	105	90.4	98.9	99.9	102.5	107	101	98.2	99.2
1972	100.4	109.8	115	109	83.5	103.8	102.1	109.7	120	106	95.6	101.1
1973	109.8	118.3	120	118	95.8	112.0	110.6	118.5	131	114	103.9	109.4
1974	109.4	118.4	120	118	98.8	109.2	108.6	116.3	124	114	106.4	104.8
1975	105.8	114.5	103	116	101.7	101.6	103.3	110.4	114	109	103.7	98.2
1976	108.7	115.6	96	119	104.6	105.9	104.6	112.1	113	112	99.2	103.0
1973												
1st qtr	108.4	110.9	121	109	94.0	115.7	114.2	116.9	135	111	107.0	117.1
2nd	109.6	118.9	120	119	93.6	112.4	109.6	117.8	131	114	102.1	108.9
3rd	103.0	116.0	101	119	90.1	101.0	103.4	115.4	120	114	98.1	98.7
4th	118.0	127.4	137	126	105.6	118.7	115.0	123.8	141	118	108.6	113.0
1974												
1st qtr	106.7	111.2	116	110	95.3	110.5	108.8	115.6	125	113	106.2	105.8
2nd	111.8	120.5	129	119	101.0	111.9	110.2	118.0	127	115	107.2	106.8
3rd	102.3	117.7	105	120	89.8	98.2	103.2	112.9	112	113	101.6	97.6
4th	116.8	124.0	129	123	108.9	116.3	112.3	118.5	132	114	110.9	108.9
1975												
1st qtr	107.6	111.1	112	111	99.0	110.5	110.5	113.6	127	109	110.4	108.4
2nd	105.1	114.4	109	115	100.7	100.5	102.4	109.5	112	109	105.0	95.9
3rd	97.9	114.2	97	117	94.6	87.1	94.0	105.6	101	107	95.3	85.1
4th	112.6	118.3	96	122	112.5	108.1	106.5	112.8	115	112	104.2	103.6
1976												
1st qtr	107.4	106.5	84	111	101.2	112.1	107.4	108.7	114	107	103.2	109.3
2nd	108.9	115.4	91	120	105.5	106.0	103.7	110.8	109	111	99.6	101.5
3rd	100.1	115.3	90	120	94.3	91.6	97.0	109.7	102	112	92.4	91.2
4th	118.4	125.2	119	126	117.4	113.8	110.2	118.9	125	117	101.7	109.8
1977												
1st qtr	111.4	113.1	105	115	102.5	115.8	111.6	114.4	119	113	104.2	114.6
% change 1977 Q1 on 1976 Q1	+3.7	+6.2	+25	+4	+1.3	+3.3	+3.9	+5.2	+4	+6	+1.0	+4.8

[1] The total of weights for all index of production industries is 1 000.

sector. This change affects the index for engineering and allied industries and on the index for investment goods in the market sector analysis and is relevant to the period from 1973 onwards. At the total all-industries level the effects of the reclassification will tend to cancel out.

Where the UK indices of production for the engineering and allied industries grouping were derived from BSO quarterly production inquiry returns, these have been deflated by revised price indices which incorporate an allowance for differing behaviour of import and export prices. They also take account of both the lag between order and delivery and the extent to which differing pricing methods are used by firms in the engineering industries. Fuller details of these revisions (which have not yet been introduced into the Scottish index of production) are given in *Economic Trends*, May 1977, published by HMSO.

The results for the latest quarter should be treated with caution as they are liable to revision as later and fuller information becomes available.

Inquiries: 031-556 8400 ext. 4081.

British Film Fund Agency returns

The British Film Fund Agency has authorised the publication of the following information for the five weeks ended 30 July 1977:

	£
Distributors' earnings submitted	
Low cost films:	
Eligible (after multiplying by 2½)	(3 378)
Not eligible for 2½ times rental	86 016
	82 638
High-cost films (including newsreels after multiplying by 2½)	293 043
	375 681
Films under 3000 ft (after multiplying by 2½)	72 670
	448 351
Levy collections paid to agency by HM Customs and Excise to 23 August 1977 approximately covering entertainments for the five weeks ended 30 July 1977	441 379

The ninth interim allocation for the twentieth year will be at the rate of 48 per cent.

Registration of British, community and foreign films

The following are details of films registered by the Department of Trade under the Films Acts 1960 to 1970, as amended by the European Communities Act 1972, during the week ended Friday, 2 September 1977.

BR/E indicates that the film is a British quota film, EC that the film is a quota film. The date which forms part of the registration number of each is the date on which quota life of the film expires.

Title of film	Registered no.	Playing time minutes	Date of registration	Registered in the name of	Maker's name
BRITISH					
Review No. 1 (31st Year)	BR/E 39291/4/9/82	9	1 September	Data Film Distributors Ltd	The National Coal Board
Movietone News 2517	BR/E 39184/4/9/82	8	2 September	British Movietonews Ltd	British Movietonews Ltd
COMMUNITY					
Yellow Emanuelle	EC/39294/4/9/82	95	2 September	Miracle Films Ltd	Cinescorpion Produzione Cinematografica SRL, Rome
FOREIGN					
Gymslip Lovers	F 39292	84	1 September	Columbia-Warner Distributors Ltd	The Blazers Co, New York, USA
Teenage Hitchhikers	F 39293	71	1 September	Columbia-Warner Distributors Ltd	Jerry Kaufman Productions, New York, USA
The Adventures of the Wilderness Family	F 39295	100	2 September	Pacific International Enterprises (GB) Ltd	Pacific International Enterprises Inc, Oregon, USA

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PQ 364 Radio and electronic components for first quarter 1977
PQ 367 Radio, radar and electronic capital goods for first quarter 1977
PQ 381.2 Trailers, ceravans and freight containers for first quarter 1977
PQ 399.6 Metal hollow-ware for first quarter 1977
PQ 489 General printing and publishing for first quarter 1977
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SD 5 Catering trades for second quarter 1977

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(a) annually (m) monthly (q) quarterly

Air transport: trade by air (a) 1 Jul 77
Balance of payments
current account (m) 19 Aug 77
overseas royalties 12 Aug 77
trends in invisibles 29 Apr 77
see also Overseas trade of the UK
Business names and limited partnerships (a) 18 Feb 77
Capital expenditure:
manufacturing, distributive and service industries (q) 2 Sept 77
by regions 18 Feb 77
Catering trades turnover (q) 26 Aug 77
Census of production (a) 28 Jan 77
Check trading (a) 12 Aug 77
Chemicals industry activity (q) 1 Jul 77
Companies
acquisitions and mergers (q) 12 Aug 77
insolvencies (q) 5 Aug 77
liquidity (q) This week
new registrations:
Gt. Britain (m) 26 Aug 77
N. Ireland (m) 12 Aug 77
rate of return on capital (a) 8 Oct 76
structure of company financing 4 Feb 77
Construction work overseas (a) 15 Oct 76
EEC economic indicators
see Foreign trade
Energy trends (m) 2 Sept 77
Engineering industries:
production indices (m)
sales and orders (m) 19 Aug 77
Film industry
British Film Fund Agency returns (m) This week
cinema admissions and takings (m) 12 Aug 77
exhibitors' quota returns (a) 6 May 77
overseas payments and earnings (a) 26 Aug 77
registrations of films (a) 4 Feb 77
Food
consumption levels (6m) 25 Mar 77
household consumption (q) 1 Jul 77
Footwear industry:
production, orders and deliveries (m) 26 Aug 77
Foreign trade: industrial countries' economic indicators (m) 2 Sept 77
quarterly analysis (q) 2 Sept 77
see also Overseas trade of the UK
Hire purchase business (m) This week
Industrial production
index numbers (m) 19 Aug 77
Scotland (q) This week
Wales (q) 29 Jul 77
Insurance companies: investments and assets (a) 20 Aug 76
Investment
book values of overseas direct investments (every 3 years) 25 Feb 77
industry's investment intentions (3 times a year) 10 Jun 77
investment and earnings overseas (a) 5 Aug 77
Made-up clothing: orders and deliveries (m) 26 Aug 77
Man-made fibres
deliveries (q) 10 Jun 77
production (m) 12 Aug 77
production: quarterly analysis (q) 10 Jun 77
Metal-working machine tools (m) 5 Aug 77
Motor industry
car and commercial vehicle production (m) 2 Sept 77
estimated figures (m) This week
motor trade turnover (q) 26 Aug 77
Office development permits (q) 2 Sept 77
Official reserves (m) This week
Overseas trade of the UK
direct exporters and credit terms (a) 12 Aug 77
analysis of trends (q) 2 Sept 77
backrun (a) 11 Mar 77
export prospects (q) 17 June 77
invoicing in foreign currencies 22 Apr 77
see also Balance of payments
Pension funds: investments and assets (a) 20 Aug 76
Regional development grants (q) 12 Aug 77
Research and development expenditure 24 Jun 77 and 1 Jul 77
Retail prices index (m) 19 Aug 77
Retail trades
sales (m) This week
provisional figures (m) 19 Aug 77
stocks (m) 19 Aug 77
Royalties: overseas transactions (a) 12 Aug 77
Selective assistance
section 7 (m) 26 Aug 77
section 7 £10,000 or more (q) 15 Jul 77
section 8 (q) 24 Jun 77
Shipping: nationality of vessels in UK seaborne trade (a) This week
Steel:
consumption and stocks (q) 1 Apr 77
Stocks
manufacturers' and distributors' (q) 2 Sept 77
manufacturers' (m) This week
retail (m) 19 Aug 77
Television: overseas payments and earnings (a) 26 Aug 77
Textiles
activity in the industry (q) 1 Jul 77
carpet sales (m) 22 Jul 77
cotton industry production (m) 26 Aug 77
hosiery production (m) 12 Aug 77
wholesale houses' sales and stocks (m) 2 Sept 77
wool exports (q) 26 Aug 77
wool output (m) 26 Aug 77
Tourism
overseas travel and tourism (a) 29 Jul 77
overseas travel and tourism (q) 29 Jul 77
Wholesale prices
average prices of selected commodities (a) 13 May 77
index numbers (m) 19 Aug 77

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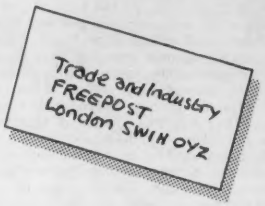

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703	713	723	733	743	753	763	773	783	793	803	813	823	833	843	853	863	873	883	893
704	714	724	734	744	754	764	774	784	794	804	814	824	834	844	854	864	874	884	894
705	715	725	735	745	755	765	775	785	795	805	815	825	835	845	855	865	875	885	895
706	716	726	736	746	756	766	776	786	796	806	816	826	836	846	856	866	876	886	896
707	717	727	737	747	757	767	777	787	797	807	817	827	837	847	857	867	877	887	897
708	718	728	738	748	758	768	778	788	798	808	818	828	838	848	858	868	878	888	898
709	719	729	739	749	759	769	779	789	799	809	819	829	839	849	859	869	879	889	899
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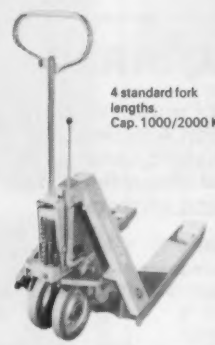

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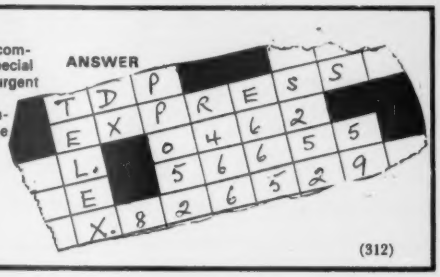

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Registered as a Newspaper Published by Her Majesty's Stationery Office, Atlantic House, Holborn Viaduct, London EC1P 1BN, for the Department of Industry, 1 Victoria Street, London SW1H 0ET. Printed by The Garden City Press Limited, Pixmore Avenue, Letchworth, Herts, SG6 1JS.

ISBN 0 11 724872 x
ISSN 0006-5323